

# SPGR Sub-Project Completion Report

## Project Title

Coordinated Sub-Project on Characterization of Important Plant Genetic Resources (BJRI Component)

Duration: October 2011 to June 2014

## Executing Organization

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## Submitted to



PIU-BARC, NATP: Phase -1  
BARC Complex  
Farmgate, Dhaka-1215



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## Executive Summary

The project aimed to characterize important plant genetic resources of jute, kenaf and mesta. This includes Geographical Indication (GI) materials, released/registered varieties of jute, kenaf and mesta, and germplasm of deshi jute (*C. capsularis*) and tossa jute (*C. olitorius*). Four Geographical Indication materials were collected from Kishoreganj and Tangail regions and these were Suti Pat and Ashman Tara of deshi jute, Deo Nailla of tossa jute and Bot Nailla of kenaf. During the project period, 2 GI materials of deshi jute, 1 GI material of tossa jute, 1 GI material of kenaf, 7 varieties of deshi jute, 5 varieties of tossa jute, 3 varieties of kenaf, 2 varieties of mesta, 48 germplasm of deshi jute and 47 germplasm of tossa jute, were characterized as per descriptor of jute. Clear variation was observed in the GI materials in respect of leaf size and shape, petiole colour, 1000 seed weight and flowering time. These GI materials have economic importance in these areas and that farmers are cultivating these materials. The released varieties of deshi and tossa jute have clear distinctness among themselves in respect of leaf size and shape, petiole colour, 1000 seed weight and flowering time. Germplasm materials of deshi and tossa jute were also distinct from each other in respect of pigmentation, leaf size and shape, petiole colour, flowering time and, fruit size and shape. Two GI materials of cotton namely Comilla cotton 1 (Hill cotton 1) and Comilla cotton 2 (Hill cotton 2) were also characterized. These are being cultivated in the hilly areas of Chittagong for the last 150-200 years. Clear variation was observed between Comilla cotton 1 and Comilla cotton 2 in respect of lint colour. Comilla cotton 2 has brown lint colour while Comilla cotton 1 has white lint colour.

DNA finger printing of 2 GI materials of deshi jute namely, Suti Pat and Asman Tara, 1 GI material of tossa jute namely, Deo Nailla, 2 released varieties of tossa jute namely, O- 4 and O-72, 5 germplasm of deshi jute namely, accession numbers 1780, 1784, 2386, 2430 and 2415, and 4 germplasm of tossa jute namely, accession numbers 1041, 1050, 1056 and 1065 was completed. The study showed that *C. capsularis* and *C. olitorius* were separated distinctly by RAPD marker. The five genotypes of *C. capsularis* formed one cluster, whereas four genotypes of *C. olitorius* grouped into another cluster. The primer MHR-24 gave important information for separating *C. capsularis* from *C. olitorius*. The MHR-24 primer generated 6 distinct bands with 9 genotypes and 3 bands were considered as polymorphic. Difference between the highest and lowest genetic distance value revealed that there were wide variability among nine jute varieties.

**1. Sub-Project Title: Coordinated Sub-Project on “Characterization of Important Plant Genetic Resources” (BJRI Component)**

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**4. Duration:** October 2011 to June 2014.

**5. Date of approval (by the Executive Council/signing of LoA):** December 01, 2011

**6. Total approved budget:** (Tk): 3744620.00

**Total fund received** (Tk): 3744620.00

**Total fund Spent** (Tk): 3723657.00 (up to 30 June 2014 )

**Unspent/balance fund** (Tk): 20963.00

**Reason for the balance:** Honorarium (Third year) of PI and Co-PI's for 3 months remain unspent.

**7. Justification of undertaking the sub-project:** Bangladesh Jute Research Institute developed 44 varieties of jute, kenaf and mesta using valuable germplasm materials. Out of which 17 varieties are being cultivated in the farmers field and rest are conserved in the Gene Bank. Moreover, four Geographical Indication (GI) materials those were economically important need to be explored. The GI materials and released varieties of BJRI urgently need to be characterized. Characterization and documentation include both quantitative and qualitative traits and those characters which are for genetic improvement of crops. For strengthening the research work of Bangladesh Jute Research Institute, molecular characterization through DNA fingerprinting using molecular markers is need to be initiated immediately.

BJRI has started the activities of collection, conservation, characterization, evaluation and documentation of germplasm. Initially, it started with an old stock of 1662 accessions of land races, obsolete cultivars, genetic stocks and mutants which are being maintained in the Gene Bank. At present, a total of 6012 accessions comprising 4180 accessions of *Corchorus* (15 species), 1461 accessions of *Hibiscus* (22 species), 252 accessions of allied genera (15 species) and 119 accessions of interspecific hybrids have been conserved in the Gene Bank of BJRI. Until now half of the accessions of jute, kenaf and mesta germplasm have been characterized for morpho-agronomic parameters. So the rest half of the accessions should be characterized immediately for improving the high yielding varieties.

Unfortunately, collection, characterization and documentation work have not kept pace with the growing size of the collections for various reasons. In a view of the realization of the importance of these species of potential value for genetic improvement the present proposal was undertaken by BJRI for collection, characterization and documentation of valuable germplasm for morpho-agronomic traits.

## 8. Sub-project objectives:

- i) To characterize and document some germplasm of jute, kenaf and mesta including Geographical Indication materials for morpho-agronomic attributes.
- ii) To characterize germplasm materials at molecular level using molecular markers (RAPD).

## 9. Methodology followed in conducting research/ investigation:

**Locations:** Central Station, Dhaka and, Jute Agriculture Experimental Station Manikgonj and Regional Station Kishoregonj of BJRI.

Materials used in this study;

a) Seventeen released/ registered varieties of jute, kenaf and mesta are given below:

- i) *C. capsularis* varieties (7): D-154-2 (Shada Pat), CVL-1 (Shabuj Pat), CVE-3 (Ashu Pat), CC-45 (Joo- Pat), BJRI Deshi Pat-5 (BJC-7370), BJRI Deshi Pat-6 (BJC-83), BJRI Deshi Pat-7, (BJC- 2142).
- ii) *C. olitorius* varieties (5): O-4, O-9897 (Falgooni Tossa), BJRI Tossa Pat-3 (OM-1), BJRI Tossa Pat-4 (O-72), BJRI Tossa Pat-5 (Lal Tossa).
- iii) *H. cannabinus* varieties (3): HC-2, HC-95, BJRI kenaf-3 (Bot kenaf).
- iv) *H. sabdariffa* varieties (2): HS-24, BJRI vegetable mesta-1.

b) Four Geographical Indication (GI) materials of jute and kenaf, namely Suti Pat and Asman Tara of *C. capsularis*, Deo Nailla of *C. olitorius* and Bot Nailla of Kenaf. These were collected from Kishorgonj and Tangail in 2012. Besides two GI materials of cotton, Comilla cotton 1 (Hill cotton 1) and Comilla cotton 2 (Hill cotton 2) were collected from Banderban in 2012.

## c) Ninety five germplasm of jute:

*C. capsularis* (Deshi jute): Total number of accessions 48.

These are; Accession numbers 1780, 1784, 2150, 2156, 2168, 2183, 2191, 2196, 2253, 2267, 2386, 2415, 2430, 2445, 2448, 2497, 2511, 2512, 2517, 2528, 2532, 2533, 2538, 2545, 2549, 2552, 2556, 2571, 2678, 2762, 2823, 2857, 2995, 3176, 3251, 3255, 3272, 3276, 3277, 3281, 3309, 3410, 3449, 3490, 3616, 3633, 3875, 3914.

*C. olitorius* (Tossa jute): Total number of accessions 47.

These are; Accession numbers 1041, 1050, 1056, 1062, 1065, 1066, 1093, 1095, 1143, 1151, 1155, 1156, 1157, 1158, 1261, 1312, 1313, 1338, 1346, 1357, 1362, 1442, 1465, 1987, 2407, 2429, 2670, 3491, 3499, 3708, 3711, 3716, 3724, 3755, 3756, 3801, 3802, 3809, 3812, 4159, 4178, 4229, 4305, 4307, 4450, 4852, 5009.

Each variety/accession was grown in two lines each of 3m length.

**d) Target and achievement of characterization of jute, kenaf and mesta.**

**(a) Target of characterization**

Name of Crops	Target of characterization (as per PP)							
	GI		Cultivar		Variety		Germplasm	
	Mor	Mol	Mor	Mol	Mor	Mol	Mor	Mol
<i>C. capsularis</i>	2	2	-	-	7	7	50	50
<i>C. olitorius</i>	1	1	-	-	5	5	50	50
<i>H. cannabinus</i> (Kenaf)	1	1	-	-	3	3	-	-
<i>H. sabdariffa</i> (Mesta)	-	-	-	-	2	2	-	-
<i>G. arboreum</i> (Cotton)	2	2	-	-	-	-	-	-
Total	6	6	-	-	17	17	100	100

**(b) Target of characterization (Revised)**

Name of Crops	Target of characterization (as per PP)							
	GI		Cultivar		Variety		Germplasm	
	Mor	Mol	Mor	Mol	Mor	Mol	Mor	Mol
<i>C. capsularis</i>	2	2	-	-	7	7	48	48
<i>C. olitorius</i>	1	1	-	-	5	5	47	47
<i>H. cannabinus</i> (Kenaf)	1	1	-	-	3	3	-	-
<i>H. sabdariffa</i> (Mesta)	-	-	-	-	2	2	-	-
<i>G. arboreum</i> (Cotton)	2	2	-	-	-	-	-	-
Total	6	6	-	-	17	17	95	95

**(c) Achievement:**

Name of Crops	Characterization							
	GI		Cultivar		Variety		Germplasm	
	Mor	Mol	Mor	Mol	Mor	Mol	Mor	Mol
<i>C. capsularis</i>	2	2	-	-	7	-	48	5
<i>C. olitorius</i>	1	1	-	-	5	2	47	4
<i>H. cannabinus</i> (Kenaf)	1	-	-	-	3	-	-	-
<i>H. sabdariffa</i> (Mesta)	-	-	-	-	2	-	-	-
<i>G. arboreum</i> (Cotton)	2	-	-	-	-	-	-	-
Total	6	3	-	-	17	2	95	9

**Data collection:** Field and laboratory data were collected. Morphological characterization of GI materials, varieties, and germplasm of *C. capsularis* and *C. olitorius* were made as per descriptor list of IJO.

The following parameters were considered for characterization;

1. Stem colour
2. Leaf colour
3. Vein colour
4. Petiole colour
5. Stipule (+,-)
6. Stipule colour
7. Stipule shape
8. Branch habit
9. Leaf shape
10. Leaf texture
11. Leaf margin
12. Canopy
13. Pigmentation of flower bud (Calyx)
14. Flower colour
15. Pigmentation of fruits
16. Fruit shape
17. Seed dispersal mechanism
18. Seed coat colour
19. Plant height (cm)
20. Leaf length/breadth ratio
21. Days to first flowering (D)
22. Days to 50% flowering of plants (D)
23. Leaf angle (dg)
24. Petiole length (cm)
25. Node number
26. Base diameter (mm)
27. Core diameter (mm)
28. Dry fibre weight/plant (g)
29. Stick weight/plant (g)
30. 1000 seed weight. (g)

## **e) DNA finger printing**

### **Isolation of genomic DNA**

Two GI materials of *C. capsularis*, namely Suti Pat and Asman Tara, one GI material of *C. olitorius*, namely Deo Nailla, two varieties of *C. olitorius*, namely O - 4 and BJRI tossa -4 (O-72), five genotypes of *C. capsularis*, namely accession numbers 1780, 1784, 2386, 2430 and 2415, and four genotypes of *C. olitorius*, namely accession numbers 1041, 1050, 1056 and 1065, were used in this study. Genomic DNA was isolated from 15-17 days old seedlings. Approximately 100 mg tissue was cut into small pieces, homogenized and digested with extraction buffer [Tris 100mM, EDTA 20mM, NaCl 2M, CTAB 2%, PVP 2% and Marcapto ethanol 2%] at 65<sup>0</sup>C for 30 minutes. Then DNA was purified by extraction with Phenol: Chloroform: Isoamyl alcohol (25:24:1, v:v:v) and it was precipitated using ice cold isopropanol in presence of 0.3 M sodium acetate. Finally DNA was pelleted and washed in 70% ethanol, dried and dissolved in an appropriate volume of TE buffer (10mM Tris-HCl, 1mM EDTA pH-8.0). After RNase treatment the DNA was extracted repeating the same protocol. Finally the pellets were washed with 600µl absolute ethanol followed by 70% ice cold ethanol. The DNA was air dried and resuspended in TE buffer and stored at -20<sup>0</sup>C. DNA samples were evaluated both qualitatively and quantitatively using agarose gel electrophoresis and spectrophotometer, respectively.

### **Quantification of DNA concentration using spectrophotometer**

DNA sample was quantified at 260 nm through spectrophotometrically (Spectronic<sup>R</sup> Genesis<sup>TM</sup>). The final DNA concentration of each template stock was adjusted to 50 ng/µl.

### **Primer selection**

A total of 10 decamer primers of arbitrary sequence (MHR 21, MHR 22, MHR 23, MHR 24, MHR 25, OPG 1, OPG 2, OPG 3, OPG 4 and OPG 5) were screened on a sub sample of two randomly chosen individuals to test their suitability for amplification of the DNA sequences that could be scored accurately. Primers were evaluated on the basis of intensity of bands, consistency within individuals, and presence of smearing and potential for population discrimination. A final subset of three primers exhibiting good quality banding patterns and sufficient variability were selected and used for further analysis.

### **Polymerase chain reaction (PCR)**

Amplification was carried out and the reaction mixtures were prepared in a volume of 10µl containing 1µl of 10X Taq buffer, 2 µl of 10µM primer, 1 µl of 25 mM dNTPs, 1 unit of Ampli Taq DNA polymerase and 100 ng genomic DNA and a suitable amount of sterile deionized water. DNA amplification was performed in an oil-free thermal cycler (Master Cycler Gradient, Eppendorf), programmed as follows: 3 minutes at 94<sup>0</sup> C for initial strand separation followed by 40 cycles comprising 1 minute denaturation at 94<sup>0</sup> C, 1 min annealing at 35<sup>0</sup> C and elongation or extension at 72<sup>0</sup> C for 2 minutes. An additional cycle of 7 minutes at 72<sup>0</sup> C was used for final extension.



## **Electrophoretic separation and visualization of PCR product**

The amplified products for each sample were separated by electrophoresis in 1.4% agarose gel containing ethidium bromide in 1xTBE buffer at 120V for 90 minutes, molecular weight DNA markers (100bp DNA ladder) was electrophoresed alongside the RAPD reactions. DNA bands were visualized on computerized UV light chamber and photographed by computer with the help of colour printer.

## **Scoring and analysis of RAPD data**

The RAPD bands were scored visually on the basis of their presence (denoted as 1) or absence (as 0), separately for each genotype and each primer. Only those bands that were intense, well defined and reproducible were scored. The scores obtained using the primer in the RAPD analysis were then pooled to create a single data matrix. This was used to estimate polymorphic loci, Nei's gene diversity, population differentiation, genetic distance (GD), and to construct a UPGMA dendrogram among populations using a computer program, POPGENE. Gene frequency estimation for RAPD loci was based on the assumption of a two allelic system. Only one of the two alleles is capable to amplify a RAPD marker by primer annealing at an unknown genomic position (locus). The other is the "null" allele incapable of amplification, mainly because of loss of primer annealing site by mutation. The two allele assumption is in most cases acceptable because, co-dominant loci showing band shifts are few. In this system, only a null homozygote is detectable as negative for the RAPD band of interest.

Under the assumption of Hardy-Weinberg equilibrium the null allele frequency ( $q$ ) may be  $(N/n)$ , where  $N$  and  $n$  are the number of band negative individuals observed and the sample size, respectively. The frequency of the other allele ( $P$ ) is  $1-q$ . The assumption of the two-allele system enables us to calculate the Nei's genetic distance from the RAPD pattern.

Genetic similarity values defined as the fraction of shared bands between the RAPD profiles of any two individuals on the same gel were calculated manually RAPD markers of the same molecular weight on the data matrix according to the following formula-

$$\text{Similarity index (SI)} = 2N_{xy}/N_x + N_y$$

Where,  $N_{xy}$  is the number of RAPD bands shared by individuals  $x$  and  $y$  respectively, and  $N_x$  and  $N_y$  are the number of bands in individual  $x$  and  $y$ , respectively.

The SI value ranges from 0 to 1. When  $SI = 1.0$ , the two DNA profiles are identical and when  $SI$  is 0.0, there are no common bands between the two profiles. Within population similarity ( $S_i$ ) was calculated as the average of SI across all possible comparisons between individuals within a population. Between population similarity ( $S_{ij}$ ) was calculated as the average similarity between each paired individuals of population  $i$  and  $j$ . Gene flow, ( $N_m$ ) was estimated according to the following formula:

$$\text{Gene flow, } N_m = 0.5 (1 - G_{ST}) / G_{ST}$$

Where,  $G_{ST}$  is the proportion of total genetic diversity attributable to sub population. It is also known as coefficient of gene differentiation. The  $G_{ST}$  values were calculated by using the following formula-  $G_{ST} = 1 - H_S / H_T$

Where,  $H_S$  is the mean average heterozygosity of the total population and  $H_T$  is the mean of Hardy-Weinberg expectation of heterozygosity obtained with population average allele frequencies.

During the project period from October 2011 to April 2014, four GI materials of jute and kenaf, two GI materials of cotton, 7 varieties of deshi jute (*Corchorus capsularis*), 5 varieties of tossa jute (*C. olitorius*), three varieties of kenaf (*Hibiscus cannabinus*) and two varieties of mesta (*H. sabdariffa*), 48 germplasm of deshi jute and 47 germplasm of tossa jute were grown and raised in the experimental field of Central Station, Dhaka and, Manikganj and Kishoregonj Regional Stations of BJRI. Intercultural operations were done properly. Fertilizer was applied to the experimental field as per requirement. Characterization data of all the materials were recorded at 75-90 days age of the plants (except cotton).

## **10. Results and discussion:**

### **a. Geographical indication (GI) materials of jute and cotton:**

Four GI materials of jute and kenaf were collected from Kishoregonj and Tangail regions. These were Suti Pat and Ashman Tara of deshi jute, Deo Nailla of Tossa jute and Bot Nailla of kenaf.

**Suti Pat:** Suti Pat was collected from Md. Abdus Salam, Kiraton, Karimgonj of Kishoregonj and about 10-15 acres of land are being cultivated with Suti Pat in Karimgonj area of Kishoregonj. The farmers of this area are cultivating Suti Pat for about 100 years.

**Asman Tara:** Asman Tara was collected from Md. Shumsul Haq, Md. Abdul Majid and Md. Wahad Ali Mondol, Kharjana of Tangail and about 10 acres of land are cultivated with Asman Tara in Tangail area. Farmers of Tangail areas are cultivating Asman Tara for about 50 years.

**Deo Nailla:** Deo Nailla was collected from Md. Kamal Uddin, Deohonda of Kishoregonj and about 20-25 acres of land are being cultivated in Kishoregonj area. This is cultivating in Kishoregonj area for about 100 years.

**Bot Nailla:** Bot Nailla was collected from Md. Jalal Uddin and Abdul Hai, Taldanga, Tarial of Kishoregonj, and about 10-12 acres are cultivated with Bot Nailla in Kishoregonj area. This is being cultivated in Kishoregonj area for about 100 years.

It was observed that the GI materials of jute have clear distinctness among themselves in respect of plant height, base diameter, leaf size and shape, leaf angle, petiole length, node number, flowering time and dry fiber weight. All the GI materials of jute and kenaf gave higher fibre yield, highly tolerant to disease, insect and pest, and stick is harder than the existing materials. These four GI materials were characterized as per descriptor list of IJO.

**Cotton:** Two GI materials of cotton (*Gossypium arboreum*), Comilla cotton 1, (Hill cotton 1) and Comilla cotton 2 (Hill cotton 2), were also characterized. These were collected from Kaichang Morong, Noapara of Banderban. The materials are being cultivated in the hilly areas of Bangladesh for about 100 years. About 5-10 acres of land are being cultivated with these materials. The main difference between the two types of cotton is in lint colour, Comilla cotton 2 (Hill cotton 2) has brown lint colour and Comilla cotton 1 (Hill cotton 1) has white lint colour. Tables and figures of GI materials of jute and cotton are presented from pages 8 to 19.

## Distinctness of the morphological characters of some Geographical Indication (GI) materials of Jute

**Crop: Jute (*Corchorus capsularis* L.)**

**Local Name: Suti Pat**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Rough or non glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded Capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	270
20.	Leaf length/breadth ratio	2.39:1
21.	Days to first flowering (D)	110
22.	Days to 50% flowering of plants (D)	120
23.	Leaf angle (dg)	76
24.	Petiole length (cm)	8.40
25.	Node number	74
26.	Base diameter (mm)	29.40
27.	Core diameter (mm)	23.50
28.	Dry fibre weight (g)	26.80
29.	Stick weight (g)	87.60
30.	1000 seed weight. (g)	3.4

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Variety:** Suti Pat

**Sowing date:** 04/04/2012

**Species:** *Corchorus capsularis* L.

**Location:** Kishoregonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some Geographical Indication (GI) materials of Jute

**Crop: Jute (*Corchorus capsularis* L.)**

**Local Name: Asman Tara**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	255
20.	Leaf length/breadth ratio	2.71:1
21.	Days to first flowering (D)	120
22.	Days to 50% flowering of plants (D)	130
23.	Leaf angle (dg)	65
24.	Petiole length (cm)	7.40
25.	Node number	58
26.	Base diameter (mm)	30.40
27.	Core diameter (mm)	35.50
28.	Dry fibre weight (g)	28.80
29.	Stick weight (g)	85.60
30.	1000 seed weight. (g)	3.3

**Source: Descriptors for Jute**

**Location: Tangail**









## Photographs showing different morphological characters

**Variety:** Asman Tara

**Sowing date:** 04/04/2012

**Species:** *Corchorus capsularis* L.

**Location:** Tangail

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some Geographical Indication (GI) materials of Jute

**Crop: Jute (*Corchorus olitorius* L.)**

**Local Name: Deo Nailla**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate-lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Blue
19.	Plant height (cm)	235
20.	Leaf length/breadth ratio	2.19:1
21.	Days to first flowering (D)	130
22.	Days to 50% flowering of plants (D)	140
23.	Leaf angle (dg)	55
24.	Petiole length (cm)	6.20
25.	Node number	48
26.	Base diameter (mm)	22.20
27.	Core diameter (mm)	18.28
28.	Dry fibre weight (g)	28.80
29.	Stick weight (g)	30.54
30.	1000 seed weight (g)	1.6

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Variety:** Deo Nailla

**Sowing date:** 04/04/2012

**Species:** *Corchorus olitorius* L.

**Location:** Kishoregonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some Geographical Indication (GI) materials of Kenaf

**Crop: Kenaf (*Hibiscus cannabinus* L.)**

**Local Name : Bot Nailla**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Deeply lobed
10.	Leaf texture	Smooth or glossy
11.	Leaf margin	Wavy
12.	Canopy	Light
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow, red circle in middle
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Fruit pubescence	Bristle
18.	Seed dispersal mechanism	Indehiscent
19.	Seed coat colour	Brown
20.	Seed shape	Angular
21.	Plant height (cm)	365
22.	Leaf length/breadth ratio	1.25:1
23.	Days to first flowering (D)	140
24.	Days to 50% flowering of plants (D)	160
25.	Leaf angle (dg)	70
26.	Petiole length (cm)	7
27.	Node number	38
28.	Base diameter (mm)	25
29.	Core diameter (mm)	22
30.	Dry fibre weight (g)	18
31.	Stick weight (g)	75
32.	1000 seed weight (g)	24.4

**Source: Descriptors for kenaf**

**Location: Kishoregonj**





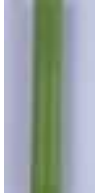



## Photographs showing different morphological characters

Variety: Bot Nailla

Species: *Hibiscus cannabinus* L.

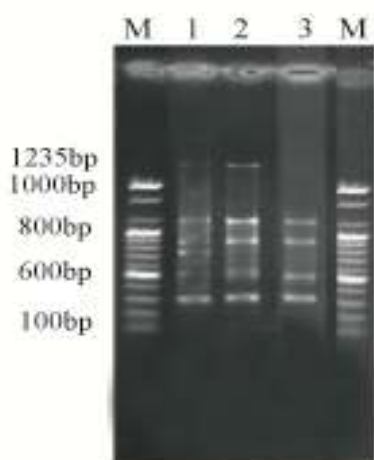
Sowing date: 15/04/2012

Location: Kishoregonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

### DNA finger printing of GI materials of jute:

Selected three primers were used to screen three GI materials of jute, namely Suti Pat and Asma Tara of *C. capsularis*, and Deo Nailla of *C. olitorius*, but only one primer (MHR-24) amplified in all the three genotypes (Figure 1). Other two primers (MHR-21 and MHR-23), which didn't produce bands in three genotypes were not considered in this study. Primer MHR-24 produced three loci in which one was considered polymorphic. The band sizes ranged from 250bp to 1235bp. Suti Pat and Asman Tara of *C. capsularis* and Deo Nailla of *C. olitorius* produced different band sizes. This revealed that Suti Pat and Asman Tara of *C. capsularis* are clearly distinct from each other. Deo Nailla of *C. olitorius* also showed different bands.



**Figure 1.** RAPD profiles of GI materials of jute using primer MHR-24. Lane 1: Suti Pat, Lane 2: Asman Tara, Lane 3: Deo Nailla. M = 100 bp DNA ladder.

## Distinctness of the morphological characters of some Geographical Indication (GI) materials of Cotton

**Crop: Cotton (*Gossypium arboreum* L.)**

**Local Name: Comilla cotton 1 (Hill cotton 1)**

**Sowing Date: 20/06/2012**

Des. No.	Characteristics	States of the character
1.	Growth habit	Erect
2.	Colour of Plant	Green
3.	Hairiness (Leaf and plant)	Slightly hairy
4.	Leaf shape	Lobed
5.	Petal colour	Cream
6.	Petal spot	Absent
7.	Pollen colour	Yellow
8.	Boll shape	Round
9.	Boll opening	Normal
10.	Seed fuzz	Fuzzy
11.	Fuzz Colour	White
12.	Lint Colour	White
13.	Plant height (cm)	100-140
14.	Days to 50% flowering	70
15.	Days to 50% opening of bolls	140
16.	Others: Seed & Seedling characters	
	a) 100 seed weight (g)	6.14
	b) Root length (cm) at 5 days	2.35
	c) Root hair density at 5 days	Low

**Source: Descriptors for Cotton, IBPGR, 1985**

**Location: Banderban**









## Photographs showing different morphological characters

**Variety:** Comilla cotton 1 (Hill cotton 1)

**Sowing date:** 20/06/2012

**Species:** *Gossypium arboreum* L.

**Location:** Banderban

			
<b>Seed</b>	<b>Leaf hairiness</b>	<b>Stem hairiness</b>	
			
<b>Petal colour &amp; pollen colour</b>	<b>Boll shape</b>	<b>Boll burst</b>	

## Distinctness of the morphological characters of some Geographical Indication (GI) materials of Cotton

**Crop: Cotton (*Gossypium arboreum* L.)**

**Local Name: Comilla cotton 2 (Hill cotton 2)**

**Sowing Date: 20/06/2012**

Des. No.	Characteristics	States of the character
1.	Growth habit	Erect
2.	Colour of Plant	Green
3.	Hairiness (Leaf and plant)	Slightly hairy
4.	Leaf shape	Lobed
5.	Petal colour	Cream
6.	Petal spot	Absent
7.	Pollen colour	Cream
8.	Boll shape	Round
9.	Boll opening	Normal
10.	Seed fuzz	Fuzzy
11.	Fuzz Colour	Grey
12.	Lint Colour	Grey
13.	Plant height (cm)	95-130
14.	Days to 50% flowering	65
15.	Days to 50% opening of bolls	135
16.	Others: Seed & Seedling characters	
	a) 100 seed weight (g)	5.62
	b) Root length (cm) at 5 days	2.50
	c) Root hair density at 5 days	Low

**Source: Descriptors for Cotton, IBPGR, 1985**

**Location: Banderban**









## Photographs showing different morphological characters

**Variety:** Comilla cotton 2 (Hill cotton 2)

**Sowing date:** 20/06/2012

**Species:** *Gossypium arboreum* L.

**Location:** Banderban

			
<b>Seed</b>	<b>Leaf hairiness</b>	<b>Stem hairiness</b>	
			
<b>Petal colour &amp; pollen colour</b>	<b>Boll shape</b>	<b>Boll burst</b>	
			<b>Leaf Shape</b>

## Characterization of some released/ registered varieties of jute, kenaf and mesta

**b. Released/registered varieties of jute, kenaf and mesta:**

Seven released varieties of deshi jute (D-154, CVE-3, CVL-1, CC- 45, BJC-83 and BJC-7370. BJC-2142), five released varieties of tossa jute (O-4, O-9897, OM-1, O-72 and O-795), three registered varieties of kenaf (*Hibiscus cannabinus*) (HC-2, HC-95, Bot kenaf) and two registered varieties of Mesta (HS-2 and HS-24) were characterized as per descriptor list of IJO. All the 17 varieties of deshi jute, tossa jute, kenaf and mesta showed clear distinctness among themselves in respect of plant height, leaf size and shape, petiole colour, base diameter, flowering time, dry fibre weight and dry stick weight. All these varieties are now being cultivated commercially in different areas of the country. Tables and figures of these varieties are presented from pages 22 to 55.



## Distinctness of the morphological characters of the released/registered varieties of Jute

**Crop: Jute (*Corchorus capsularis* L.)**

**Variety: Shada Pat (D-154-2) (1961)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit Shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	286
20.	Leaf length/breadth ratio	2.36:1
21.	Days to first flowering (D)	120
22.	Days to 50% flowering of plants (D)	130
23.	Leaf angle (dg)	60
24.	Petiole length (cm)	6.56
25.	Node number	68
26.	Base diameter (mm)	16.85
27.	Core diameter (mm)	14.36
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	56
30.	1000 seed weight (g)	3.7

**Source: Descriptors for Jute**

**Location: Manikganj**









## Photographs showing different morphological characters

**Variety:** Shada Pat (D-154-2)

**Sowing date:** 15/04/2012

**Species:** *Corchorus capsularis* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of the released/registered varieties of Jute

**Crop: Jute (*Corchorus capsularis* L.)**

**Variety: Joo-Pat (CC-45) (1979)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	204
20.	Leaf length/breadth ratio	2.03:1
21.	Days to first flowering (D)	130
22.	Days to 50% flowering of plants (D)	140
23.	Leaf angle (dg)	73
24.	Petiole length (cm)	5.40
25.	Node number	57
26.	Base diameter (mm)	22.20
27.	Core diameter (mm)	18.60
28.	Dry fibre weight (g)	15.20
29.	Stick weight (g)	52.60
30.	100 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikganj**









## Photographs showing different morphological characters

**Variety:** Joo-Pat (CC-45)

**Sowing date:** 15/04/2012

**Species:** *Corchorus capsularis* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of the released/registered varieties of Jute

**Crop: Jute (*Corchorus capsularis* L.)**

**Variety: Ashu Pat (CVE-3) (1977)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light Red
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brownish
19.	Plant height (cm)	324
20.	Leaf length/breadth ratio	2.62:1
21.	Days to first flowering (D)	120
22.	Days to 50% flowering of plants (D)	130
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	6.05
25.	Node number	62
26.	Base diameter (mm)	18.58
27.	Core diameter (mm)	15.20
28.	Dry fibre weight (g)	17
29.	Stick weight (g)	48
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikganj**





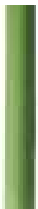



## Photographs showing different morphological characters

**Variety:** Ashu Pat (CVE-3)

**Sowing date:** 15/04/2012

**Species:** *Corchorus capsularis* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of the released/registered varieties of Jute

**Crop: Jute (*Corchorus capsularis* L.)**

**Variety: Shabuj Pat (CVL-1) (1977)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	328
20.	Leaf length/breadth ratio	2.65:1
21.	Days to first flowering (D)	130
22.	Days to 50% flowering of plants (D)	140
23.	Leaf angle (dg)	60
24.	Petiole length (cm)	7.48
25.	Node number	68
26.	Base diameter (mm)	22.20
27.	Core diameter (mm)	18.28
28.	Dry fibre weight (g)	23
29.	Stick weight (g)	58
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikganj**









## Photographs showing different morphological characters

**Variety:** Shabuj Pat (CVL-1)

**Sowing date:** 15/04/2012

**Species:** *Corchorus capsularis* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of the released/registered varieties of Jute

**Crop: Jute (*Corchorus capsularis* L.)**

**Variety: BJRI Deshi Pat-5 (BJC-7370) (1995)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light Red
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Light Red
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	352
20.	Leaf length/breadth ratio	2.07:1
21.	Days to first flowering (D)	130
22.	Days to 50% flowering of plants (D)	140
23.	Leaf angle (dg)	48
24.	Petiole length (cm)	5.45
25.	Node number	74
26.	Base diameter (mm)	15.62
27.	Core diameter (mm)	11.76
28.	Dry fibre weight (g)	21
29.	Stick weight (g)	55
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikganj**









## Photographs showing different morphological characters

**Variety:** BJRI Deshi Pat-5 (BJC-7370)

**Sowing date:** 15/04/2012

**Species:** *Corchorus capsularis* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of the released/registered varieties of Jute

**Crop: Jute (*Corchorus capsularis* L.)**

**Variety: BJRI Deshi Pat-6 (BJC-83) (1995)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	310
20.	Leaf length/breadth ratio	2.78:1
21.	Days to first flowering (D)	140
22.	Days to 50% flowering of plants (D)	150
23.	Leaf angle (dg)	56
24.	Petiole length (cm)	7.15
25.	Node number	66
26.	Base diameter (mm)	19.30
27.	Core diameter (mm)	16.45
28.	Dry fibre weight (g)	17
29.	Stick weight (g)	54
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikganj**









## Photographs showing different morphological characters

**Variety:** BJRI Deshi Pat-6 (BJC-83)

**Sowing date:** 15/04/2012

**Species:** *Corchorus capsularis* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of the released/registered varieties of Jute

**Crop: Jute (*Corchorus capsularis* L.)**

**Variety: BJRI Deshi Pat-7 (BJC-2142) (2008)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	340
20.	Leaf length/breadth ratio	2.87:1
21.	Days to first flowering (D)	110
22.	Days to 50% flowering of plants (D)	130
23.	Leaf angle (dg)	65
24.	Petiole length (cm)	7.51
25.	Node number	69
26.	Base diameter (mm)	18.20
27.	Core diameter (mm)	15.35
28.	Dry fibre weight (g)	18
29.	Stick weight (g)	59
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikganj**









## Photographs showing different morphological characters

**Variety:** BJRI Deshi Pat-7 (BJC-2142)

**Sowing date:** 15/04/2012

**Species:** *Corchorus capsularis* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of the released/registered varieties of Jute

**Crop: Jute (*Corchorus olitorius* L.)**

**Variety: O-4 (1967)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green -no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	359
20.	Leaf length/breadth ratio	2.94:1
21.	Days to first flowering (D)	120
22.	Days to 50% flowering of plants (D)	140
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	55.45
25.	Node number	80
26.	Base diameter (mm)	21.56
27.	Core diameter (mm)	16.15
28.	Dry fibre weight (g)	23.50
29.	Stick weight (g)	81.40
30.	1000 seed weight (g)	2.2

**Source: Descriptors for Jute**

**Location: Manikganj**









## Photographs showing different morphological characters

**Variety: O-4**

**Sowing date: 15/04/2012**

**Species: *Corchorus olitorius* L.**

**Location: Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of the released/registered varieties of Jute

**Crop: Jute (*Corchorus olitorius* L.)**

**Variety: BJRI Tossa Pat-4 (O-72) (2002)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green -no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	349
20.	Leaf length/breadth ratio	2.20:1
21.	Days to first flowering (D)	130
22.	Days to 50% flowering of plants (D)	150
23.	Leaf angle (dg)	50
24.	Petiole length (cm)	5.41
25.	Node number	73
26.	Base diameter (mm)	13.76
27.	Core diameter (mm)	12.97
28.	Dry fibre weight (g)	30
29.	Stick weight (g)	72
30.	1000 seed weight (g)	1.7

**Source: Descriptors for Jute**

**Location: Manikganj**









## Photographs showing different morphological characters

Variety: BJRI Tossa Pat-4 (O-72)

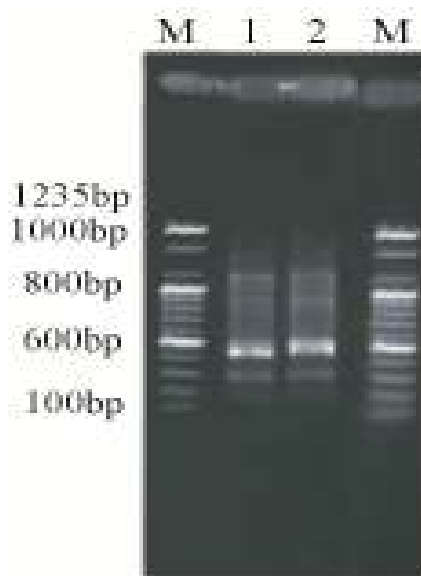
Sowing date: 15/04/2012

Species: *Corchorus olitorius* L.

Location: Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## DNA finger printing of two varieties of *C. olitorius*:



**Figure 2.** RAPD profiles of two varieties of *C. olitorius* using primer MHR-24. Lane 1: 0-4, Lane 2: BJRI Tossapat-4 (O-72). M = 100 bp DNA ladder.

## Distinctness of the morphological characters of the released/registered varieties of Jute

**Crop: Jute (*Corchorus olitorius* L.)**

**Variety: Falgooni Tossa (O-9897) (1987)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green -no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	404
20.	Leaf length/breadth ratio	2.55:1
21.	Days to first flowering (D)	130
22.	Days to 50% flowering of plants (D)	150
23.	Leaf angle (dg)	52
24.	Petiole length (cm)	4.10
25.	Node number	106
26.	Base diameter (mm)	18.14
27.	Core diameter (mm)	16.58
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	50
30.	1000 seed weight (g)	1.8

**Source: Descriptors for Jute**

**Location: Manikganj**









## Photographs showing different morphological characters

**Variety:** Falgooni Tossa (O-9897)

**Sowing date:** 15/04/2012

**Species:** *Corchorus olitorius* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of the released/registered varieties of Jute

**Crop: Jute (*Corchorus olitorius* L.)**

**Variety: BJRI Tossa Pat-3 (OM-1) (1995)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green -no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	320
20.	Leaf length/breadth ratio	2.98:1
21.	Days to first flowering (D)	140
22.	Days to 50% flowering of plants (D)	160
23.	Leaf angle (dg)	60
24.	Petiole length (cm)	4.25
25.	Node number	95
26.	Base diameter (mm)	14.26
27.	Core diameter (mm)	11.66
28.	Dry fibre weight (g)	12.04
29.	Stick weight (g)	29.2
30.	1000 seed weight (g)	2.0

**Source: Descriptors for Jute**

**Location: Manikganj**









## Photographs showing different morphological characters

**Variety:** BJRI Tossa Pat-3 (OM-1)

**Sowing date:** 15/04/2012

**Species:** *Corchorus olitorius* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of the released/registered varieties of Jute

**Crop: Jute (*Corchorus olitorius* L.)**

**Variety: BJRI Tossa Pat-5 (Lal tossa) (O-795) (2008)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Red
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Red
5.	Stipule (+,-)	+
6.	Stipule colour	Red
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	339
20.	Leaf length/breadth ratio	2.45:1
21.	Days to first flowering (D)	140
22.	Days to 50% flowering of plants (D)	160
23.	Leaf angle (dg)	46
24.	Petiole length (cm)	5.60
25.	Node number	72
26.	Base diameter (mm)	16.30
27.	Core diameter (mm)	13.80
28.	Dry fibre weight (g)	20.00
29.	Stick weight (g)	57.40
30.	1000 seed weight (g)	1.7

**Source: Descriptors for Jute**

**Location: Manikganj**









## Photographs showing different morphological characters

**Variety:** BJRI Tossa Pat-5 (Lal tossa) (O-795)

**Sowing date:** 15/04/2012

**Species:** *Corchorus olitorius* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## distinctness of the morphological characters of the released/registered varieties of Kenaf

**Crop: Kenaf (*Hibiscus cannabinus* L.)**

**Local Name: Joli kenaf (HC-2) (1977)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Cordate, unlobed
10.	Leaf texture	Smooth or glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow, red circle in middle
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Fruit pubescence	Bristle
18.	Seed dispersal mechanism	Dehiscent
19.	Seed coat colour	Brown
20.	Seed shape	Angular
21.	Plant height (cm)	268
22.	Leaf length/breadth ratio	2.26:1
23.	Days to first flowering (D)	110
24.	Days to 50% flowering of plants (D)	130
25.	Leaf angle (dg)	60
26.	Petiole length (cm)	14.06
27.	Node number	85
28.	Base diameter (mm)	18.78
29.	Core diameter (mm)	16.16
30.	Dry fibre weight (g)	14.40
31.	Stick weight (g)	37.60
32.	1000 seed weight (g)	2.83

**Source: Descriptors for kenaf**

**Location: Manikganj**









## Photographs showing different morphological characters

**Variety:** Joli Kenaf (HC-2)

**Sowing date:** 15/04/2012

**Species:** *Hibiscus cannabinus* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of the released/registered varieties of Kenaf

**Crop: Kenaf (*Hibiscus cannabinus* L.)**

**Local Name: BJRI Kenaf-2 (HC-95) (1995)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Deeply lobed
10.	Leaf texture	Smooth or glossy
11.	Leaf margin	Wavy
12.	Canopy	Light
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow, red circle in middle
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Fruit pubescence	Bristle
18.	Seed dispersal mechanism	Dehiscent
19.	Seed coat colour	Brown
20.	Seed shape	Angular
21.	Plant height (cm)	244
22.	Leaf length/breadth ratio	0.75:1
23.	Days to first flowering (D)	120
24.	Days to 50% flowering of plants (D)	140
25.	Leaf angle (dg)	50
26.	Petiole length (cm)	12.86
27.	Node number	67
28.	Base diameter (mm)	17.74
29.	Core diameter (mm)	14.50
30.	Dry fibre weight (g)	13.00
31.	Stick weight (g)	39.80
32.	1000 seed weight (g)	2.75

**Source: Descriptors for kenaf**

**Location: Manikganj**









## Photographs showing different morphological characters

Variety: BJRI Kenaf-2 (HC-95)

Sowing date: 15/04/2012

Species: *Hibiscus cannabinus* L.

Location: Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of the released/registered varieties of Kenaf

**Crop: Kenaf (*Hibiscus cannabinus* L.)**

**Local Name: BJRI Kenaf-3 (Bot kenaf) (2010)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Deeply lobed
10.	Leaf texture	Hairy
11.	Leaf margin	Wavy
12.	Canopy	Light
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow with red circle in middle
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Fruit pubescence	Bristle
18.	Seed dispersal mechanism	Indehiscent
19.	Seed coat colour	Brown
20.	Seed shape	Angular
21.	Plant height (cm)	335
22.	Leaf length/breadth ratio	1.20:1
23.	Days to first flowering (D)	140
24.	Days to 50% flowering of plants (D)	160
25.	Leaf angle (dg)	66
26.	Petiole length (cm)	7.60
27.	Node number	37
28.	Base diameter (mm)	26.46
29.	Core diameter (mm)	21.56
30.	Dry fibre weight (g)	17.60
31.	Stick weight (g)	70
32.	1000 seed weight (g)	24.04

**Source: Descriptors for kenaf**

**Location: Manikganj**





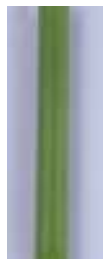



## Photographs showing different morphological characters

**Variety:** BJRI kenaf-3 (Bot Kenaf)

**Sowing date:** 15/04/2012

**Species:** *Hibiscus cannabinus* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of the released/registered varieties of Kenaf

**Crop: Mesta (*Hibiscus sabdariffa* L.)**

**Local Name: Tani Mesta (HS-24) (1977)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Deeply lobed
10.	Leaf texture	Rough or non-glossy
11.	Leaf margin	Wavy
12.	Canopy	Light
13.	Pigmentation of flower bud (Calyx)	Red
14.	Flower colour	White with red circle in middle
15.	Pigmentation of fruits	Red
16.	Fruit shape	Many seeded capsule
17.	Fruit pubescence	Bristle
18.	Seed dispersal mechanism	Dehiscent
19.	Seed coat colour	Brown
20.	Seed shape	Angular
21.	Plant height (cm)	3.38
22.	Leaf length/breadth ratio	0.87:1
23.	Days to first flowering (D)	110
24.	Days to 50% flowering of plants (D)	120
25.	Leaf angle (dg)	56
26.	Petiole length (cm)	6.96
27.	Node number	70
28.	Base diameter (mm)	23.16
29.	Core diameter (mm)	18.28
30.	Dry fibre weight (g)	34.40
31.	Stick weight (g)	97.20
32.	1000 seed weight (g)	2.07

**Source: Descriptors for mesta**

**Location: Manikganj**









## Photographs showing different morphological characters

**Variety:** Tani Mesta (HS-24)

**Sowing date:** 15/04/2012

**Species:** *Hibiscus sabdariffa* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of the released/registered varieties of Kenaf

**Crop: Mesta (*Hibiscus sabdariffa* var. *sabdariffa*)**

**Local Name: BJRI Mesta-2 (VM-1) (2010)**

**Sowing Date: 15/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Red
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Red
5.	Stipule (+,-)	+
6.	Stipule colour	Red
7.	Stipule shape	Scaly
8.	Branch habit	Non Branched
9.	Leaf shape	Lobed
10.	Leaf texture	Smooth
11.	Leaf margin	Entire
12.	Canopy	Light
13.	Pigmentation of flower bud (Calyx)	Red
14.	Flower colour	White with red circle in middle
15.	Pigmentation of fruits	Red
16.	Fruit shape	Many seeded capsule
17.	Fruit pubescence	Bristle
18.	Seed dispersal mechanism	Dehiscent
19.	Seed coat colour	Brown
20.	Seed colour	Angular
21.	Plant height (cm)	1.65
22.	Leaf length/breadth ratio	0.76:1
23.	Days to first flowering (D)	120
24.	Days to 50% flowering of plants (D)	130
25.	Leaf angle (dg)	54
26.	Petiole length (cm)	9.28
27.	Node number	52
28.	Base diameter (mm)	18.84
29.	Core diameter (mm)	16.86
30.	Dry fibre weight (g)	23
31.	Stick weight (g)	61
32.	1000 seed weight (g)	2.30

**Source: Descriptors for mesta**

**Location: Manikganj**




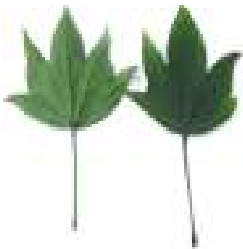




## Photographs showing different morphological characters

**Variety:** BJRI Mesta-2 (VM-1)

**Sowing date:** 15/04/2012

**Species:** *Hibiscus sabdariffa* L.

**Location:** Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## **Characterization of some germplasm of deshi and tossa jute**

### **c. Germplasm of jute:**

#### **Germplasm of deshi jute:**

Forty eight germplasm of deshi jute, namely accession numbers 1780, 1784, 2150, 2156, 2168, 2183, 2191, 2196, 2253, 2267, 2386, 2415, 2430, 2445, 2448, 2497, 2511, 2512, 2517, 2528, 2532, 2533, 2538, 2545, 2549, 2552, 2556, 2571, 2678, 2762, 2823, 2857, 2995, 3176, 3251, 3255, 3272, 3276, 3277, 3281, 3309, 3410, 3449, 3490, 3616, 3633, 3875 and 3914 were characterized as per descriptor list of IJO . A wide range of variation was observed among the genotypes and these varied from each other in respect of plant height, base diameter, leaf size and shape, petiole colour, petiole length, leaf angle, flowering time, node number, dry fibre weight/plant and dry stick weight/plant. The genotypes 2156, 2253, 2448, 2497, 2528, 2545, 2549, 2556, 2571, 3176, 3309, 3255, 3410, 3490 and 3914 had light red petiole colour, therefore these genotypes may be utilized in breeding programme as genetic marker for crop improvement. Besides, the genotypes 1780, 2156, 2497, 2532, 2533, 2549, 2552, 2571, 3410 and 2762 gave higher fibre weight/plant. Therefore, these genotypes may be used in breeding programme for developing varieties with high fibre yield. Tables and figures of these materials are presented from pages 58 to 153.

#### **Germplasm of tossa jute:**

Forty seven germplasm materials of tossa jute, namely accession numbers 1041, 1050, 1056, 1062, 1065, 1066, 1093, 1095, 1143, 1151, 1155, 1156, 1157, 1158, 1261, 1312, 1313, 1338, 1346, 1357, 1362, 1442, 1465, 1987, 2407, 2429, 2670, 3491, 3499, 3708, 3711, 3716, 3724, 3755, 3756, 3801, 3802, 3809, 3812, 4159, 4178, 4229, 4305, 4307, 4450, 4852 and 5009 were characterized as per descriptor list of IJO. A wide range of variation was observed among the genotypes and they varied from each other in respect of plant height, base diameter, leaf size and shape, stem colour, petiole colour, days to flowering, leaf angle, petiole length, node number, dry fibre weight/plant and dry stick weight/plant. Six genotypes namely 1442, 3708, 3711, 3716, 3802 and 4159 had red pigmentation in their stem, petiole and stipule, and these are highly tolerant to disease, insect and pest. Therefore, these genotypes may be utilized in breeding programme for developing disease, insect and pest resistant varieties with specific marker. The genotypes 1312, 1362, 1987, 2407, 2429, 2670, 3499, 3755, 3756, 3801, 3802, 4178, 4852 and 4450 gave high fibre weight/plant and therefore these genotypes may be used in breeding programme to breed varieties with high fibre yield. Tables and figures of these materials are presented from pages 154 to 247.

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 1780**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	270
20.	Leaf length/breadth ratio	2.9:1
21.	Days to first flowering (D)	107
22.	Days to flowering of 50% plants (D)	117
23.	Leaf angle (dg)	76
24.	Petiole length (cm)	8.40
25.	Node number	74
26.	Base diameter (mm)	20.40
27.	Core diameter (mm)	18.50
28.	Dry fibre weight (g)	20.80
29.	Stick weight (g)	67.60
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 1780

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 1784**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

<b>Des. No.</b>	<b>Characteristics</b>	<b>States of the character</b>
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	275
20.	Leaf length/breadth ratio	2.6:1
21.	Days to first flowering (D)	112
22.	Days to flowering of 50% plants (D)	120
23.	Leaf angle (dg)	76
24.	Petiole length (cm)	6.42
25.	Node number	70
26.	Base diameter (mm)	21.20
27.	Core diameter (mm)	17.20
28.	Dry fibre weight (g)	15.60
29.	Stick weight (g)	57.60
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 1784

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit



## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2150**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	278
20.	Leaf length/breadth ratio	2.4:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	95
23.	Leaf angle (dg)	62
24.	Petiole length (cm)	6.84
25.	Node number	74
26.	Base diameter (mm)	21.96
27.	Core diameter (mm)	18.28
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	49
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2150**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2156**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light red
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	284
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	79
23.	Leaf angle (dg)	62
24.	Petiole length (cm)	6.68
25.	Node number	68
26.	Base diameter (mm)	22.20
27.	Core diameter (mm)	18.28
28.	Dry fibre weight (g)	23
29.	Stick weight (g)	58
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2156**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2168**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green – no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	278
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	56
22.	Days to flowering of 50% plants (D)	73
23.	Leaf angle (dg)	60
24.	Petiole length (cm)	7.13
25.	Node number	65
26.	Base diameter (mm)	22.82
27.	Core diameter (mm)	19.48
28.	Dry fibre weight (g)	18
29.	Stick weight (g)	55
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2168**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2185**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	298
20.	Leaf length/breadth ratio	2.2:1
21.	Days to first flowering (D)	56
22.	Days to flowering of 50% plants (D)	71
23.	Leaf angle (dg)	60
24.	Petiole length (cm)	6.98
25.	Node number	68
26.	Base diameter (mm)	20.88
27.	Core diameter (mm)	18.25
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	54
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 2185

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit



## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2191**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	270
20.	Leaf length/breadth ratio	2.1:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	92
23.	Leaf angle (dg)	63
24.	Petiole length (cm)	6.26
25.	Node number	58
26.	Base diameter (mm)	20.16
27.	Core diameter (mm)	18.58
28.	Dry fibre weight (g)	15
29.	Stick weight (g)	47
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 2191

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

Accession No. 2196

Crop: Jute (*Corchorus capsularis* L.)

Sowing Date: 04/04/2012

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	294
20.	Leaf length/breadth ratio	2.1:1
21.	Days to first flowering (D)	88
22.	Days to flowering of 50% plants (D)	100
23.	Leaf angle (dg)	62
24.	Petiole length (cm)	6.76
25.	Node number	62
26.	Base diameter (mm)	21.46
27.	Core diameter (mm)	18.32
28.	Dry fibre weight (g)	17
29.	Stick weight (g)	53
30.	1000 seed weight (g)	3.4

Source: Descriptors for Jute

Location: Manikgonj









## Photographs showing different morphological characters

**Accession No. 2196**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2253**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light Red
5.	Stipule (+,-)	+
6.	Stipule colour	Tip Red
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Light Red
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	288
20.	Leaf length/breadth ratio	2.27:1
21.	Days to first flowering (D)	90
22.	Days to flowering of 50% plants (D)	110
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	7.20
25.	Node number	71
26.	Base diameter (mm)	22.48
27.	Core diameter (mm)	18.86
28.	Dry fibre weight (g)	18
29.	Stick weight (g)	58
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2253**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

Accession No. 2267

Crop: Jute (*Corchorus capsularis* L.)

Sowing Date: 04/04/2012

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	278
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	57
22.	Days to flowering of 50% plants (D)	81
23.	Leaf angle (dg)	60
24.	Petiole length (cm)	6.84
25.	Node number	73
26.	Base diameter (mm)	21.82
27.	Core diameter (mm)	17.75
28.	Dry fibre weight (g)	18
29.	Stick weight (g)	57
30.	1000 seed weight (g)	3.3

Source: Descriptors for Jute

Location: Manikgonj









## Photographs showing different morphological characters

Accession No. 2267

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit



## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2386**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	287
20.	Leaf length/breadth ratio	2.2:1
21.	Days to first flowering (D)	59
22.	Days to flowering of 50% plants (D)	84
23.	Leaf angle (dg)	62
24.	Petiole length (cm)	6.44
25.	Node number	78
26.	Base diameter (mm)	21.72
27.	Core diameter (mm)	18.65
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	59
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 2386

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2415**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Light red
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	294
20.	Leaf length/breadth ratio	3.0:1
21.	Days to first flowering (D)	81
22.	Days to flowering of 50% plants (D)	95
23.	Leaf angle (dg)	56
24.	Petiole length (cm)	6.84
25.	Node number	66
26.	Base diameter (mm)	22.75
27.	Core diameter (mm)	18.38
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	54
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2415**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2430**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	286
20.	Leaf length/breadth ratio	2.4:1
21.	Days to first flowering (D)	74
22.	Days to flowering of 50% plants (D)	93
23.	Leaf angle (dg)	60
24.	Petiole length (cm)	7.15
25.	Node number	68
26.	Base diameter (mm)	20.68
27.	Core diameter (mm)	17.75
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	48
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2430**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2445**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	286
20.	Leaf length/breadth ratio	2.4:1
21.	Days to first flowering (D)	74
22.	Days to flowering of 50% plants (D)	93
23.	Leaf angle (dg)	56
24.	Petiole length (cm)	6.86
25.	Node number	64
26.	Base diameter (mm)	20.45
27.	Core diameter (mm)	18.28
28.	Dry fibre weight (g)	15
29.	Stick weight (g)	47
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2445**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2448**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Red
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Light Red
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Light Red
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	278
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	93
23.	Leaf angle (dg)	59
24.	Petiole length (cm)	6.74
25.	Node number	68
26.	Base diameter (mm)	20.16
27.	Core diameter (mm)	18.24
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	51
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**




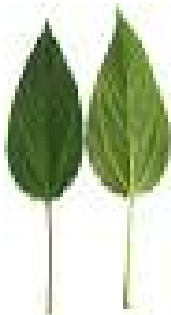




## Photographs showing different morphological characters

**Accession No. 2448**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

Accession No. 2497

Crop: Jute (*Corchorus capsularis* L.)

Sowing Date: 04/04/2012

Des. No.	Characteristics	States of the character
1.	Stem colour	Green
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Red
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	284
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	56
22.	Days to flowering of 50% plants (D)	73
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	6.95
25.	Node number	65
26.	Base diameter (mm)	22.36
27.	Core diameter (mm)	18.42
28.	Dry fibre weight (g)	19
29.	Stick weight (g)	53
30.	1000 seed weight (g)	3.3

Source: Descriptors for Jute

Location: Manikgonj









## Photographs showing different morphological characters

**Accession No. 2497**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2511**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green– no trace of red Pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	318
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	90
23.	Leaf angle (dg)	59
24.	Petiole length (cm)	7.14
25.	Node number	72
26.	Base diameter (mm)	22.43
27.	Core diameter (mm)	18.76
28.	Dry fibre weight (g)	18
29.	Stick weight (g)	54
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2511**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole Colour</b>	<b>Leaf</b>
			
<b>Stem Colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2512**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	278
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	73
22.	Days to flowering of 50% plants (D)	120
23.	Leaf angle (dg)	60
24.	Petiole length (cm)	6.76
25.	Node number	65
26.	Base diameter (mm)	20.48
27.	Core diameter (mm)	18.66
28.	Dry fibre weight (g)	17
29.	Stick weight (g)	45
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2512**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2517**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	298
20.	Leaf length/breadth ratio	2.5:1
21.	Days to first flowering (D)	71
22.	Days to flowering of 50% plants (D)	97
23.	Leaf angle (dg)	56
24.	Petiole length (cm)	6.78
25.	Node number	68
26.	Base diameter (mm)	21.65
27.	Core diameter (mm)	18.98
28.	Dry fibre weight (g)	18
29.	Stick weight (g)	55
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2517**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2528**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Reddish
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	249
20.	Leaf length/breadth ratio	2.4:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	75
23.	Leaf angle (dg)	72
24.	Petiole length (cm)	7.50
25.	Node number	57
26.	Base diameter (mm)	20.40
27.	Core diameter (mm)	18.80
28.	Dry fibre weight (g)	16.80
29.	Stick weight (g)	55.80
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2528**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2532**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Light Red
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	217
20.	Leaf length/breadth ratio	2.6:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	93
23.	Leaf angle (dg)	77
24.	Petiole length (cm)	6.80
25.	Node number	56
26.	Base diameter (mm)	22.60
27.	Core diameter (mm)	20.50
28.	Dry fibre weight (g)	21.0
29.	Stick weight (g)	60.40
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 2532

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2533**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	216
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	74
22.	Days to flowering of 50% plants (D)	93
23.	Leaf angle (dg)	72
24.	Petiole length (cm)	8.20
25.	Node number	52
26.	Base diameter (mm)	21.00
27.	Core diameter (mm)	18.20
28.	Dry fibre weight (g)	20.40
29.	Stick weight (g)	61.60
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2533**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2538**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	286
20.	Leaf length/breadth ratio	2.2:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	93
23.	Leaf angle (dg)	62
24.	Petiole length (cm)	6.79
25.	Node number	68
26.	Base diameter (mm)	21.20
27.	Core diameter (mm)	18.96
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	48
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 2538

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2545**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Reddish
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	320
20.	Leaf length/breadth ratio	2.4:1
21.	Days to first flowering (D)	51
22.	Days to flowering of 50% plants (D)	71
23.	Leaf angle (dg)	59
24.	Petiole length (cm)	7.16
25.	Node number	74
26.	Base diameter (mm)	22.76
27.	Core diameter (mm)	18.45
28.	Dry fibre weight (g)	19
29.	Stick weight (g)	58
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2545**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2549**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Reddish
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	231
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	114
22.	Days to flowering of 50% plants (D)	127
23.	Leaf angle (dg)	75
24.	Petiole length (cm)	7.20
25.	Node number	55
26.	Base diameter (mm)	20.20
27.	Core diameter (mm)	18.00
28.	Dry fibre weight (g)	19.40
29.	Stick weight (g)	65.20
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 2549

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2552**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	226
20.	Leaf length/breadth ratio	2.4:1
21.	Days to first flowering (D)	51
22.	Days to flowering of 50% plants (D)	74
23.	Leaf angle (dg)	61
24.	Petiole length (cm)	7.80
25.	Node number	49
26.	Base diameter (mm)	20.40
27.	Core diameter (mm)	18.80
28.	Dry fibre weight (g)	20.60
29.	Stick weight (g)	64.40
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2552**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2556**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Reddish
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	288
20.	Leaf length/breadth ratio	2.5:1
21.	Days to first flowering (D)	74
22.	Days to flowering of 50% plants (D)	95
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	6.92
25.	Node number	70
26.	Base diameter (mm)	22.46
27.	Core diameter (mm)	18.24
28.	Dry fibre weight (g)	18
29.	Stick weight (g)	53
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 2556

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2571**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Reddish
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	196
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	95
23.	Leaf angle (dg)	66
24.	Petiole length (cm)	4.80
25.	Node number	47
26.	Base diameter (mm)	23.60
27.	Core diameter (mm)	20.20
28.	Dry fibre weight (g)	21.60
29.	Stick weight (g)	67.20
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 2571

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2678**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	284
20.	Leaf length/breadth ratio	2.4:1
21.	Days to first flowering (D)	56
22.	Days to flowering of 50% plants (D)	73
23.	Leaf angle (dg)	59
24.	Petiole length (cm)	6.86
25.	Node number	66
26.	Base diameter (mm)	20.94
27.	Core diameter (mm)	17.58
28.	Dry fibre weight (g)	17
29.	Stick weight (g)	49
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 2678

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2762**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	324
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	70
22.	Days to flowering of 50% plants (D)	95
23.	Leaf angle (dg)	64
24.	Petiole length (cm)	6.84
25.	Node number	68
26.	Base diameter (mm)	23.26
27.	Core diameter (mm)	19.65
28.	Dry fibre weight (g)	20.60
29.	Stick weight (g)	61.0
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2762**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2823**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green – no trace of red Pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	286
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	87
23.	Leaf angle (dg)	61
24.	Petiole length (cm)	6.78
25.	Node number	65
26.	Base diameter (mm)	20.64
27.	Core diameter (mm)	18.16
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	48
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2823**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 2857**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	278
20.	Leaf length/breadth ratio	2.1:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	95
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	6.74
25.	Node number	62
26.	Base diameter (mm)	20.68
27.	Core diameter (mm)	17.46
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	52
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 2857**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

Accession No. 2995

Crop: Jute (*Corchorus capsularis* L.)

Sowing Date: 04/04/2012

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	295
20.	Leaf length/breadth ratio	2.2:1
21.	Days to first flowering (D)	74
22.	Days to flowering of 50% plants (D)	95
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	6.84
25.	Node number	65
26.	Base diameter (mm)	20.86
27.	Core diameter (mm)	18.14
28.	Dry fibre weight (g)	17
29.	Stick weight (g)	50
30.	1000 seed weight (g)	3.3

Source: Descriptors for Jute

Location: Manikgonj









## Photographs showing different morphological characters

Accession No. 2995

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3176**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light red
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	316
20.	Leaf length/breadth ratio	2.7:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	95
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	6.84
25.	Node number	64
26.	Base diameter (mm)	21.96
27.	Core diameter (mm)	18.43
28.	Dry fibre weight (g)	18
29.	Stick weight (g)	54
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 3176**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3251**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	265
20.	Leaf length/breadth ratio	2.2:1
21.	Days to first flowering (D)	51
22.	Days to flowering of 50% plants (D)	73
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	5.64
25.	Node number	56
26.	Base diameter (mm)	20.68
27.	Core diameter (mm)	17.94
28.	Dry fibre weight (g)	15
29.	Stick weight (g)	46
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**






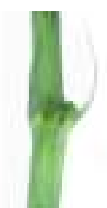


## Photographs showing different morphological characters

**Accession No. 3251**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3255**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light red
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	286
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	56
22.	Days to flowering of 50% plants (D)	75
23.	Leaf angle (dg)	56
24.	Petiole length (cm)	5.46
25.	Node number	58
26.	Base diameter (mm)	20.45
27.	Core diameter (mm)	17.64
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	48
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 3255**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3272**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	312
20.	Leaf length/breadth ratio	2.2:1
21.	Days to first flowering (D)	71
22.	Days to flowering of 50% plants (D)	95
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	7.16
25.	Node number	72
26.	Base diameter (mm)	22.64
27.	Core diameter (mm)	18.38
28.	Dry fibre weight (g)	18
29.	Stick weight (g)	55
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 3272

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3276**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	295
20.	Leaf length/breadth ratio	1.9:1
21.	Days to first flowering (D)	57
22.	Days to flowering of 50% plants (D)	74
23.	Leaf angle (dg)	59
24.	Petiole length (cm)	6.78
25.	Node number	62
26.	Base diameter (mm)	20.44
27.	Core diameter (mm)	17.56
28.	Dry fibre weight (g)	17
29.	Stick weight (g)	53
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**







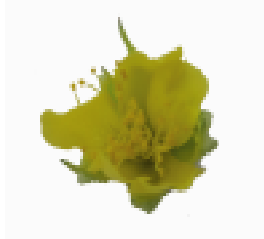

## Photographs showing different morphological characters

**Accession No. 3276**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3277**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green– no trace of red Pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	294
20.	Leaf length/breadth ratio	2.3:1
21.	Days to first flowering (D)	74
22.	Days to flowering of 50% plants (D)	84
23.	Leaf angle (dg)	60
24.	Petiole length (cm)	6.86
25.	Node number	64
26.	Base diameter (mm)	21.84
27.	Core diameter (mm)	18.84
28.	Dry fibre weight (g)	17
29.	Stick weight (g)	52
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 3277

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3281**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	288
20.	Leaf length/breadth ratio	2.4:1
21.	Days to first flowering (D)	74
22.	Days to flowering of 50% plants (D)	95
23.	Leaf angle (dg)	56
24.	Petiole length (cm)	6.84
25.	Node number	63
26.	Base diameter (mm)	21.76
27.	Core diameter (mm)	18.23
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	50
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**





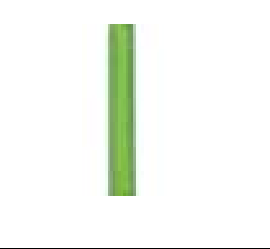
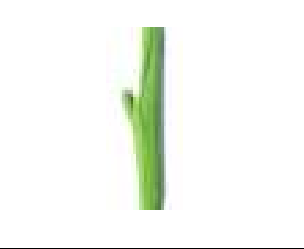


## Photographs showing different morphological characters

Accession No. 3281

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3309**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light red
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	268
20.	Leaf length/breadth ratio	2.4:1
21.	Days to first flowering (D)	74
22.	Days to flowering of 50% plants (D)	95
23.	Leaf angle (dg)	61
24.	Petiole length (cm)	6.26
25.	Node number	58
26.	Base diameter (mm)	20.68
27.	Core diameter (mm)	17.34
28.	Dry fibre weight (g)	16
29.	Stick weight (g)	46
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 3309**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3410**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light red
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	250
20.	Leaf length/breadth ratio	2.2:1
21.	Days to first flowering (D)	116
22.	Days to flowering of 50% plants (D)	129
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	6.50
25.	Node number	50
26.	Base diameter (mm)	19.12
27.	Core diameter (mm)	17.08
28.	Dry fibre weight (g)	19.4
29.	Stick weight (g)	60.0
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 3410**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3449**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower coloru	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	279
20.	Leaf length/breadth ratio	2.1:1
21.	Days to first flowering (D)	68
22.	Days to flowering of 50% plants (D)	95
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	6.76
25.	Node number	62
26.	Base diameter (mm)	18.82
27.	Core diameter (mm)	15.24
28.	Dry fibre weight (g)	15
29.	Stick weight (g)	44
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 3449

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3490**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light red
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Reddish
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	285
20.	Leaf length/breadth ratio	2.4:1
21.	Days to first flowering (D)	74
22.	Days to flowering of 50% plants (D)	97
23.	Leaf angle (dg)	56
24.	Petiole length (cm)	6.78
25.	Node number	60
26.	Base diameter (mm)	18.67
27.	Core diameter (mm)	15.24
28.	Dry fibre weight (g)	15
29.	Stick weight (g)	43
30.	1000 seed weight (g)	3.3

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 3490**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3616**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	314
20.	Leaf length/breadth ratio	2.2:1
21.	Days to first flowering (D)	100
22.	Days to flowering of 50% plants (D)	102
23.	Leaf angle (dg)	55
24.	Petiole length (cm)	7.18
25.	Node number	70
26.	Base diameter (mm)	22.46
27.	Core diameter (mm)	18.64
28.	Dry fibre weight (g)	19
29.	Stick weight (g)	62
30.	1000 seed weight (g)	2.09

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 3616**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3633**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	298
20.	Leaf length/breadth ratio	2.2:1
21.	Days to first flowering (D)	100
22.	Days to flowering of 50% plants (D)	121
23.	Leaf angle (dg)	56
24.	Petiole length (cm)	7.18
25.	Node number	68
26.	Base diameter (mm)	22.86
27.	Core diameter (mm)	18.24
28.	Dry fibre weight (g)	18
29.	Stick weight (g)	54
30.	1000 seed weight (g)	1.05

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

Accession No. 3633

Sowing date: 04/04/2012

Species: *Corchorus capsularis* L.

Location: JAES, Manikgonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit



## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3875**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	295
20.	Leaf length/breadth ratio	2.2:1
21.	Days to first flowering (D)	74
22.	Days to flowering of 50% plants (D)	91
23.	Leaf angle (dg)	56
24.	Petiole length (cm)	6.84
25.	Node number	64
26.	Base diameter (mm)	22.44
27.	Core diameter (mm)	18.36
28.	Dry fibre weight (g)	18
29.	Stick weight (g)	56
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 3875**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of deshi Jute

**Accession No. 3914**

**Crop: Jute (*Corchorus capsularis* L.)**

**Sowing Date: 04/04/2012**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light red
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth or Glossy
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded capsule
17.	Seed dispersal mechanism	Indehiscent
18.	Seed coat colour	Brown
19.	Plant height (cm)	286
20.	Leaf length/breadth ratio	2.1:1
21.	Days to first flowering (D)	115
22.	Days to flowering of 50% plants (D)	127
23.	Leaf angle (dg)	56
24.	Petiole length (cm)	6.78
25.	Node number	65
26.	Base diameter (mm)	21.87
27.	Core diameter (mm)	17.65
28.	Dry fibre weight (g)	17
29.	Stick weight (g)	47
30.	1000 seed weight (g)	3.4

**Source: Descriptors for Jute**

**Location: Manikgonj**









## Photographs showing different morphological characters

**Accession No. 3914**

**Sowing date: 04/04/2012**

**Species: *Corchorus capsularis* L.**

**Location: JAES, Manikgonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

Accession No. 1041

Crop: Jute (*Corchorus olitorius* L.)

Sowing Date: 02/04/2013

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	335
20.	Leaf length/breadth ratio	2.59:1
21.	Days to first flowering (D)	54
22.	Days to flowering of 50% plants (D)	100
23.	Leaf angle (dg)	52
24.	Petiole length (cm)	1.3
25.	Node number	80
26.	Base diameter (mm)	15.06
27.	Core diameter (mm)	11.98
28.	Dry fibre weight (g)	15.00
29.	Stick weight (g)	41.50
30.	1000 seed weight (g)	2.05

Source: Descriptors for Jute

Location: Kishoregonj









## Photographs showing different morphological characters

Accession No. 1041

Sowing date: 02/04/2013

Species: *Corchorus olitorius* L.

Location: Kishoregonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1050**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	343
20.	Leaf length/breadth ratio	2.13:1
21.	Days to first flowering (D)	24
22.	Days to flowering of 50% plants (D)	125
23.	Leaf angle (dg)	51
24.	Petiole length (cm)	4.70
25.	Node number	65
26.	Base diameter (mm)	15.03
27.	Core diameter (mm)	13.70
28.	Dry fibre weight (g)	11.10
29.	Stick weight (g)	43.96
30.	1000 seed weight (g)	2.15

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

Accession Number 1050

Sowing date: 02/04/2013

Species: *Corchorus olitorius* L.

Location: Kishoregonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit



## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1056**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	330
20.	Leaf length/breadth ratio	2.72:1
21.	Days to first flowering (D)	103
22.	Days to flowering of 50% plants (D)	130
23.	Leaf angle (dg)	53
24.	Petiole length (cm)	5.60
25.	Node number	82
26.	Base diameter (mm)	14.73
27.	Core diameter (mm)	11.90
28.	Dry fibre weight (g)	14.28
29.	Stick weight (g)	48.34
30.	1000 seed weight (g)	2.16

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1056**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1062**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	358
20.	Leaf length/breadth ratio	2.76:1
21.	Days to first flowering (D)	43
22.	Days to flowering of 50% plants (D)	58
23.	Leaf angle (dg)	52
24.	Petiole length (cm)	5.50
25.	Node number	95
26.	Base diameter (mm)	16.53
27.	Core diameter (mm)	13.82
28.	Dry fibre weight (g)	15.75
29.	Stick weight (g)	51.50
30.	1000 seed weight (g)	2.14

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1062**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1065**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	365
20.	Leaf length/breadth ratio	2.68:1
21.	Days to first flowering (D)	111
22.	Days to flowering of 50% plants (D)	130
23.	Leaf angle (dg)	52
24.	Petiole length (cm)	5.65
25.	Node number	93
26.	Base diameter (mm)	16.75
27.	Core diameter (mm)	13.53
28.	Dry fibre weight (g)	17.25
29.	Stick weight (g)	54.50
30.	1000 seed weight (g)	2.09

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1065**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1066**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	430
20.	Leaf length/breadth ratio	2.68:1
21.	Days to first flowering (D)	111
22.	Days to flowering of 50% plants (D)	130
23.	Leaf angle (dg)	50
24.	Petiole length (cm)	5.63
25.	Node number	92
26.	Base diameter (mm)	17.20
27.	Core diameter (mm)	14.40
28.	Dry fibre weight (g)	17.60
29.	Stick weight (g)	50.00
30.	1000 seed weight (g)	2.09

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1066**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1093**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	333
20.	Leaf length/breadth ratio	2.5:1
21.	Days to first flowering (D)	148
22.	Days to flowering of 50% plants (D)	160
23.	Leaf angle (dg)	54
24.	Petiole length (cm)	5.72
25.	Node number	82
26.	Base diameter (mm)	15.90
27.	Core diameter (mm)	12.20
28.	Dry fibre weight (g)	14.60
29.	Stick weight (g)	42.40
30.	1000 seed weight (g)	2.18

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1093**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1095**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	333
20.	Leaf length/breadth ratio	2.41:1
21.	Days to first flowering (D)	138
22.	Days to flowering of 50% plants (D)	152
23.	Leaf angle (dg)	53
24.	Petiole length (cm)	5.72
25.	Node number	82
26.	Base diameter (mm)	15.90
27.	Core diameter (mm)	12.20
28.	Dry fibre weight (g)	14.60
29.	Stick weight (g)	42.40
30.	1000 seed weight (g)	2.20

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1095**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1143**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	330
20.	Leaf length/breadth ratio	2.44:1
21.	Days to first flowering (D)	148
22.	Days to flowering of 50% plants (D)	156
23.	Leaf angle (dg)	50
24.	Petiole length (cm)	5.16
25.	Node number	94
26.	Base diameter (mm)	14.68
27.	Core diameter (mm)	12.64
28.	Dry fibre weight (g)	14.75
29.	Stick weight (g)	42.28
30.	1000 seed weight (g)	2.21

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1143**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1151**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	329
20.	Leaf length/breadth ratio	2.59:1
21.	Days to first flowering (D)	138
22.	Days to flowering of 50% plants (D)	154
23.	Leaf angle (dg)	51
24.	Petiole length (cm)	5.50
25.	Node number	83
26.	Base diameter (mm)	15.93
27.	Core diameter (mm)	13.80
28.	Dry fibre weight (g)	17.88
29.	Stick weight (g)	54.62
30.	1000 seed weight (g)	2.16

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1151**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1155**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Dense
12.	Canopy	Wavy
13.	Pigmentation of flower bud (Calyx)	Yellow
14.	Flower colour	Green
15.	Pigmentation of fruits	Many seeded elongated
16.	Fruit shape	Green
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	349
20.	Leaf length/breadth ratio	2.98:1
21.	Days to first flowering (D)	44
22.	Days to flowering of 50% plants (D)	58
23.	Leaf angle (dg)	50
24.	Petiole length (cm)	5.50
25.	Node number	72
26.	Base diameter (mm)	15.41
27.	Core diameter (mm)	12.81
28.	Dry fibre weight (g)	12.96
29.	Stick weight (g)	40.45
30.	1000 seed weight (g)	2.08

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1155**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregongj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1156**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	343
20.	Leaf length/breadth ratio	2.76:1
21.	Days to first flowering (D)	45
22.	Days to flowering of 50% plants (D)	59
23.	Leaf angle (dg)	52
24.	Petiole length (cm)	4.80
25.	Node number	75
26.	Base diameter (mm)	13.59
27.	Core diameter (mm)	10.99
28.	Dry fibre weight (g)	11.44
29.	Stick weight (g)	34.23
30.	1000 seed weight (g)	2.12

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1156**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1157**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	340
20.	Leaf length/breadth ratio	2.89:1
21.	Days to first flowering (D)	36
22.	Days to flowering of 50% plants (D)	59
23.	Leaf angle (dg)	50
24.	Petiole length (cm)	5.00
25.	Node number	73
26.	Base diameter (mm)	15.30
27.	Core diameter (mm)	12.35
28.	Dry fibre weight (g)	13.18
29.	Stick weight (g)	40.82
30.	1000 seed weight (g)	2.16

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1157**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1158**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seed elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	345
20.	Leaf length/breadth ratio	2.89:1
21.	Days to first flowering (D)	36
22.	Days to flowering of 50% plants (D)	59
23.	Leaf angle (dg)	51
24.	Petiole length (cm)	5.20
25.	Node number	67
26.	Base diameter (mm)	15.10
27.	Core diameter (mm)	12.58
28.	Dry fibre weight (g)	13.72
29.	Stick weight (g)	40.03
30.	1000 seed weight (g)	2.16

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1158**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1261**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	320
20.	Leaf length/breadth ratio	2.46:1
21.	Days to first flowering (D)	46
22.	Days to flowering of 50% plants (D)	62
23.	Leaf angle (dg)	48
24.	Petiole length (cm)	5.10
25.	Node number	76
26.	Base diameter (mm)	16.20
27.	Core diameter (mm)	13.70
28.	Dry fibre weight (g)	17.20
29.	Stick weight (g)	52.95
30.	1000 seed weight (g)	2.14

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1261**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1312**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	325
20.	Leaf length/breadth ratio	2.78:1
21.	Days to first flowering (D)	48
22.	Days to flowering of 50% plants (D)	62
23.	Leaf angle (dg)	53
24.	Petiole length (cm)	5.60
25.	Node number	84
26.	Base diameter (mm)	17.90
27.	Core diameter (mm)	15.40
28.	Dry fibre weight (g)	18.75
29.	Stick weight (g)	58.60
30.	1000 seed weight (g)	2.05

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1312**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1313**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	309
20.	Leaf length/breadth ratio	2.61:1
21.	Days to first flowering (D)	49
22.	Days to flowering of 50% plants (D)	64
23.	Leaf angle (dg)	48
24.	Petiole length (cm)	4.90
25.	Node number	77
26.	Base diameter (mm)	15.68
27.	Core diameter (mm)	12.72
28.	Dry fibre weight (g)	15.34
29.	Stick weight (g)	50.05
30.	1000 seed weight (g)	2.12

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1313**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1338**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	335
20.	Leaf length/breadth ratio	2.10:1
21.	Days to first flowering (D)	146
22.	Days to flowering of 50% plants (D)	158
23.	Leaf angle (dg)	47
24.	Petiole length (cm)	5.32
25.	Node number	73
26.	Base diameter (mm)	12.86
27.	Core diameter (mm)	10.00
28.	Dry fibre weight (g)	12.40
29.	Stick weight (g)	36.00
30.	1000 seed weight (g)	2.08

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1338**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1346**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	332
20.	Leaf length/breadth ratio	2.32:1
21.	Days to first flowering (D)	135
22.	Days to flowering of 50% plants (D)	145
23.	Leaf angle (dg)	51
24.	Petiole length (cm)	5.04
25.	Node number	80
26.	Base diameter (mm)	14.20
27.	Core diameter (mm)	12.10
28.	Dry fibre weight (g)	16.20
29.	Stick weight (g)	45.80
30.	1000 seed weight (g)	2.08

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1346**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1357**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	320
20.	Leaf length/breadth ratio	2.22:1
21.	Days to first flowering (D)	130
22.	Days to flowering of 50% plants (D)	152
23.	Leaf angle (dg)	50
24.	Petiole length (cm)	5.08
25.	Node number	93
26.	Base diameter (mm)	14.70
27.	Core diameter (mm)	12.62
28.	Dry fibre weight (g)	14.40
29.	Stick weight (g)	46.40
30.	1000 seed weight (g)	2.14

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1357**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1362**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	385
20.	Leaf length/breadth ratio	2.90:1
21.	Days to first flowering (D)	136
22.	Days to flowering of 50% plants (D)	145
23.	Leaf angle (dg)	52
24.	Petiole length (cm)	5.50
25.	Node number	89
26.	Base diameter (mm)	18.30
27.	Core diameter (mm)	16.25
28.	Dry fibre weight (g)	20.10
29.	Stick weight (g)	54.35
30.	1000 seed weight (g)	2.10

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1362**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

Accession No. 1442

Crop: Jute (*Corchorus olitorius* L.)

Sowing Date: 02/04/2013

Des. No.	Characteristics	States of the character
1.	Stem colour	Red
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Red
5.	Stipule (+,-)	+
6.	Stipule colour	Red
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Technical Height (cm)	325
20.	Leaf length/breadth ratio	2.23:1
21.	Days to first flowering (D)	42
22.	Days to flowering of 50% plants (D)	58
23.	Leaf angle (dg)	48
24.	Petiole length (cm)	5.02
25.	Node number	75
26.	Base diameter (mm)	14.52
27.	Core diameter (mm)	12.38
28.	Dry fibre weight (g)	13.60
29.	Stick weight (g)	39.60
30.	1000 seed weight (g)	2.14

Source: Descriptors for Jute

Location: Kishoregonj









## Photographs showing different morphological characters

Accession No. 1442

Sowing date: 02/04/2013

Species: *Corchorus olitorius* L.

Location: Kishoregonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit



## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1465**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	285
20.	Leaf length/breadth ratio	2.12:1
21.	Days to first flowering (D)	47
22.	Days to 50% flowering of plants (D)	64
23.	Leaf angle (dg)	53
24.	Petiole length (cm)	5.40
25.	Node number	78
26.	Base diameter (mm)	15.63
27.	Core diameter (mm)	12.56
28.	Dry fibre weight (g)	16.45
29.	Stick weight (g)	48.80
30.	1000 seed weight (g)	2.16

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1465**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 1987**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	335
20.	Leaf length/breadth ratio	2.40:1
21.	Days to first flowering (D)	155
22.	Days to flowering of 50% plants (D)	165
23.	Leaf angle (dg)	54
24.	Petiole length (cm)	5.90
25.	Node number	92
26.	Base diameter (mm)	17.80
27.	Core diameter (mm)	15.45
28.	Dry fibre weight (g)	18.20
29.	Stick weight (g)	58.45
30.	1000 seed weight (g)	2.24

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 1987**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 2407**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	380
20.	Leaf length/breadth ratio	2.86:1
21.	Days to first flowering (D)	148
22.	Days to flowering of 50% plants (D)	162
23.	Leaf angle (dg)	54
24.	Petiole length (cm)	5.80
25.	Node number	86
26.	Base diameter (mm)	18.65
27.	Core diameter (mm)	16.70
28.	Dry fibre weight (g)	19.40
29.	Stick weight (g)	60.35
30.	1000 seed weight (g)	2.21

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 2407**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 2429**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	370
20.	Leaf length/breadth ratio	2.13:1
21.	Days to first flowering (D)	54
22.	Days to flowering of 50% plants (D)	125
23.	Leaf angle (dg)	54
24.	Petiole length (cm)	6.10
25.	Node number	94
26.	Base diameter (mm)	18.65
27.	Core diameter (mm)	16.50
28.	Dry fibre weight (g)	19.20
29.	Stick weight (g)	62.60
30.	1000 seed weight (g)	2.15

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 2429**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 2670**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	365
20.	Leaf length/breadth ratio	2.01:1
21.	Days to first flowering (D)	60
22.	Days to flowering of 50% plants (D)	140
23.	Leaf angle (dg)	53
24.	Petiole length (cm)	5.58
25.	Node number	88
26.	Base diameter (mm)	17.90
27.	Core diameter (mm)	15.25
28.	Dry fibre weight (g)	18.60
29.	Stick weight (g)	58.40
30.	1000 seed weight (g)	2.18

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 2670**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 3491**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	365
20.	Leaf length/breadth ratio	2.11:1
21.	Days to first flowering (D)	45
22.	Days to flowering of 50% plants (D)	63
23.	Leaf angle (dg)	50
24.	Petiole length (cm)	5.56
25.	Node number	85
26.	Base diameter (mm)	18.78
27.	Core diameter (mm)	15.56
28.	Dry fibre weight (g)	18.25
29.	Stick weight (g)	51.40
30.	1000 seed weight (g)	2.10

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 3491**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 3499**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	380
20.	Leaf length/breadth ratio	2.24:1
21.	Days to first flowering (D)	56
22.	Days to flowering of 50% plants (D)	89
23.	Leaf angle (dg)	52
24.	Petiole length (cm)	6.20
25.	Node number	93
26.	Base diameter (mm)	19.48
27.	Core diameter (mm)	17.02
28.	Dry fibre weight (g)	20.20
29.	Stick weight (g)	58.65
30.	1000 seed weight (g)	2.09

**Source: Descriptors for Jute**

**Location: Kishoregonj**







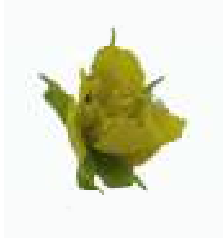

## Photographs showing different morphological characters

**Accession No. 3499**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 3708**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Red
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light Red
5.	Stipule (+,-)	+
6.	Stipule colour	Red
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	232
20.	Leaf length/breadth ratio	2.37:1
21.	Days to first flowering (D)	148
22.	Days to flowering of 50% plants (D)	165
23.	Leaf angle (dg)	53
24.	Petiole length (cm)	6.20
25.	Node number	47.40
26.	Base diameter (mm)	13.64
27.	Core diameter (mm)	11.24
28.	Dry fibre weight (g)	8.60
29.	Stick weight (g)	22.80
30.	1000 seed weight (g)	2.18

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 3708**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 3711**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Light Red
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light red
5.	Stipule (+,-)	+
6.	Stipule colour	Light red
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	232
20.	Leaf length/breadth ratio	2.37:1
21.	Days to first flowering (D)	190
22.	Days to flowering of 50% plants (D)	158
23.	Leaf angle (dg)	59
24.	Petiole length (cm)	6.70
25.	Node number	47.40
26.	Base diameter (mm)	13.64
27.	Core diameter (mm)	11.24
28.	Dry fibre weight (g)	10.60
29.	Stick weight (g)	30.80
30.	1000 seed weight (g)	2.12

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

Accession No. 3711

Sowing date: 02/04/2013

Species: *Corchorus olitorius* L.

Location: Kishoregonj

			
Seed	Canopy	Petiole colour	Leaf
			
Stem colour	Stipule	Flower	Fruit

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 3716**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Light Red
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light red
5.	Stipule (+,-)	+
6.	Stipule colour	Light red
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	276
20.	Leaf length/breadth ratio	2.31:1
21.	Days to first flowering (D)	48
22.	Days to flowering of 50% plants (D)	66
23.	Leaf angle (dg)	52
24.	Petiole length (cm)	5.60
25.	Node number	76
26.	Base diameter (mm)	15.95
27.	Core diameter (mm)	13.20
28.	Dry fibre weight (g)	18.88
29.	Stick weight (g)	55.64
30.	1000 seed weight (g)	2.09

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 3716**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 3724**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	327
20.	Leaf length/breadth ratio	2.37:1
21.	Days to first flowering (D)	155
22.	Days to flowering of 50% plants (D)	168
23.	Leaf angle (dg)	55
24.	Petiole length (cm)	5.00
25.	Node number	57.80
26.	Base diameter (mm)	14.04
27.	Core diameter (mm)	12.48
28.	Dry fibre weight (g)	15.40
29.	Stick weight (g)	47.60
30.	1000 seed weight (g)	2.14

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 3724**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 3755**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	314
20.	Leaf length/breadth ratio	2.32:1
21.	Days to first flowering (D)	120
22.	Days to flowering of 50% plants (D)	155
23.	Leaf angle (dg)	59
24.	Petiole length (cm)	5.10
25.	Node number	73.40
26.	Base diameter (mm)	19.40
27.	Core diameter (mm)	17.40
28.	Dry fibre weight (g)	22.20
29.	Stick weight (g)	57.20
30.	1000 seed weight (g)	2.14

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 3755**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 3756**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	304
20.	Leaf length/breadth ratio	2.35:1
21.	Days to first flowering (D)	147
22.	Days to 50% flowering of plants (D)	165
23.	Leaf angle (dg)	51
24.	Petiole length (cm)	5.10
25.	Node number	69.40
26.	Base diameter (mm)	17.70
27.	Core diameter (mm)	14.62
28.	Dry fibre weight (g)	19.20
29.	Stick weight (g)	60.40
30.	1000 seed weight (g)	2.14

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 3756**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 3801**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	318
20.	Leaf length/breadth ratio	2.41:1
21.	Days to first flowering (D)	152
22.	Days to 50% flowering of plants (D)	172
23.	Leaf angle (dg)	55
24.	Petiole length (cm)	4.98
25.	Node number	92
26.	Base diameter (mm)	19.08
27.	Core diameter (mm)	17.95
28.	Dry fibre weight (g)	20.48
29.	Stick weight (g)	60.76
30.	1000 seed weight (g)	2.18

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 3801**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 3802**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Light Red
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light red
5.	Stipule (+,-)	+
6.	Stipule colour	Light red
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	289
20.	Leaf length/breadth ratio	2.31:1
21.	Days to first flowering (D)	117
22.	Days to 50% flowering of plants (D)	138
23.	Leaf angle (dg)	55
24.	Petiole length (cm)	5.00
25.	Node number	57.80
26.	Base diameter (mm)	13.06
27.	Core diameter (mm)	10.46
28.	Dry fibre weight (g)	23.00
29.	Stick weight (g)	68.60
30.	1000 seed weight (g)	2.18

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 3802**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 3809**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	544
20.	Leaf length/breadth ratio	2.33:1
21.	Days to first flowering (D)	116
22.	Days to 50% flowering of plants (D)	135
23.	Leaf angle (dg)	58
24.	Petiole length (cm)	5.40
25.	Node number	88.20
26.	Base diameter (mm)	16.80
27.	Core diameter (mm)	13.82
28.	Dry fibre weight (g)	17.00
29.	Stick weight (g)	51.60
30.	1000 seed weight (g)	2.12

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 3809**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 3812**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	312
20.	Leaf length/breadth ratio	2.35:1
21.	Days to first flowering (D)	116
22.	Days to 50% flowering of plants (D)	135
23.	Leaf angle (dg)	51
24.	Petiole length (cm)	5.08
25.	Node number	71.20
26.	Base diameter (mm)	16.60
27.	Core diameter (mm)	13.00
28.	Dry fibre weight (g)	17.00
29.	Stick weight (g)	48.20
30.	1000 seed weight (g)	2.05

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 3812**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 4159**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Light red
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Light red
5.	Stipule (+,-)	+
6.	Stipule colour	Red
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	312
20.	Leaf length/breadth ratio	2.41:1
21.	Days to first flowering (D)	67
22.	Days to 50% flowering of plants (D)	86
23.	Leaf angle (dg)	53
24.	Petiole length (cm)	5.80
25.	Node number	72.60
26.	Base diameter (mm)	16.80
27.	Core diameter (mm)	13.80
28.	Dry fibre weight (g)	14.20
29.	Stick weight (g)	48.20
30.	1000 seed weight (g)	2.16

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 4159**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 4178**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	321
20.	Leaf length/breadth ratio	2.53:1
21.	Days to first flowering (D)	150
22.	Days to 50% flowering of plants (D)	168
23.	Leaf angle (dg)	54
24.	Petiole length (cm)	6.00
25.	Node number	77.40
26.	Base diameter (mm)	16.00
27.	Core diameter (mm)	13.86
28.	Dry fibre weight (g)	21.20
29.	Stick weight (g)	60.00
30.	1000 seed weight (g)	2.15

**Source: Descriptors for Jute**

**Location: Kishoregonj**







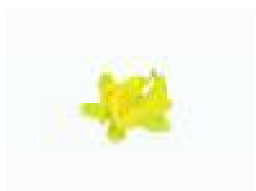

## Photographs showing different morphological characters

**Accession No. 4178**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 4229**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green - no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	302
20.	Leaf length/breadth ratio	2.10:1
21.	Days to first flowering (D)	154
22.	Days to 50% flowering of plants (D)	169
23.	Leaf angle (dg)	52
24.	Petiole length (cm)	4.60
25.	Node number	65.60
26.	Base diameter (mm)	16.76
27.	Core diameter (mm)	13.20
28.	Dry fibre weight (g)	14.80
29.	Stick weight (g)	40.40
30.	1000 seed weight (g)	2.18

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 4229**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 4305**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	270
20.	Leaf length/breadth ratio	2.32:1
21.	Days to first flowering (D)	153
22.	Days to 50% flowering of plants (D)	172
23.	Leaf angle (dg)	59
24.	Petiole length (cm)	1.60
25.	Node number	63.00
26.	Base diameter (mm)	13.10
27.	Core diameter (mm)	10.96
28.	Dry fibre weight (g)	10.60
29.	Stick weight (g)	30.00
30.	1000 seed weight (g)	2.11

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 4305**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 4307**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	345
20.	Leaf length/breadth ratio	2.23:1
21.	Days to first flowering (D)	108
22.	Days to 50% flowering of plants (D)	140
23.	Leaf angle (dg)	51
24.	Petiole length (cm)	5.75
25.	Node number	75
26.	Base diameter (mm)	16.90
27.	Core diameter (mm)	14.15
28.	Dry fibre weight (g)	18.35
29.	Stick weight (g)	49.60
30.	1000 seed weight (g)	2.00

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 4307**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 4450**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	380
20.	Leaf length/breadth ratio	2.10:1
21.	Days to first flowering (D)	146
22.	Days to 50% flowering of plants (D)	158
23.	Leaf angle (dg)	52
24.	Petiole length (cm)	6.15
25.	Node number	85
26.	Base diameter (mm)	18.75
27.	Core diameter (mm)	16.30
28.	Dry fibre weight (g)	19.25
29.	Stick weight (g)	60.90
30.	1000 seed weight (g)	2.08

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 4450**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 4852**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green - no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	375
20.	Leaf length/breadth ratio	2.22:1
21.	Days to first flowering (D)	116
22.	Days to 50% flowering of plants (D)	138
23.	Leaf angle (dg)	51
24.	Petiole length (cm)	5.95
25.	Node number	78
26.	Base diameter (mm)	18.65
27.	Core diameter (mm)	16.20
28.	Dry fibre weight (g)	18.65
29.	Stick weight (g)	59.40
30.	1000 seed weight (g)	2.16

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 4852**

**Sowing date: 02/04/2013**

**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>



## Distinctness of the morphological characters of some germplasm of tossa jute

**Accession No. 5009**

**Crop: Jute (*Corchorus olitorius* L.)**

**Sowing Date: 02/04/2013**

Des. No.	Characteristics	States of the character
1.	Stem colour	Green-no sign of any red pigmentation
2.	Leaf colour	Green
3.	Vein colour	Green
4.	Petiole colour	Green
5.	Stipule (+,-)	+
6.	Stipule colour	Green
7.	Stipule shape	Filiform
8.	Branch habit	Non Branched
9.	Leaf shape	Ovate lanceolate
10.	Leaf texture	Smooth
11.	Leaf margin	Wavy
12.	Canopy	Dense
13.	Pigmentation of flower bud (Calyx)	Green
14.	Flower colour	Yellow
15.	Pigmentation of fruits	Green
16.	Fruit shape	Many seeded elongated
17.	Seed dispersal mechanism	Dehiscent
18.	Seed coat colour	Bluish
19.	Plant height (cm)	276
20.	Leaf length/breadth ratio	2.48:1
21.	Days to first flowering (D)	118
22.	Days to 50% flowering of plants (D)	137
23.	Leaf angle (dg)	55
24.	Petiole length (cm)	5.30
25.	Node number	78
26.	Base diameter (mm)	16.80
27.	Core diameter (mm)	14.30
28.	Dry fibre weight (g)	16.75
29.	Stick weight (g)	49.90
30.	1000 seed weight (g)	2.12

**Source: Descriptors for Jute**

**Location: Kishoregonj**









## Photographs showing different morphological characters

**Accession No. 5009**

**Sowing date: 02/04/2013**

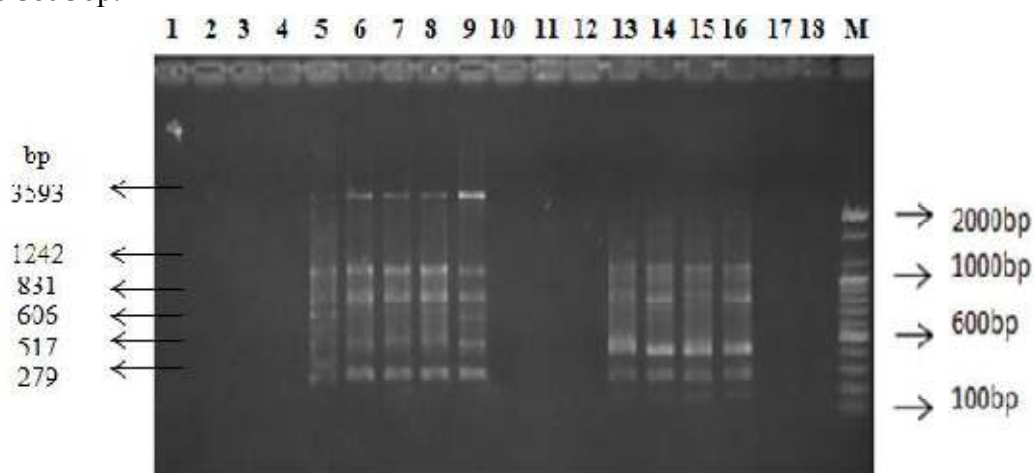
**Species: *Corchorus olitorius* L.**

**Location: Kishoregonj**

			
<b>Seed</b>	<b>Canopy</b>	<b>Petiole colour</b>	<b>Leaf</b>
			
<b>Stem colour</b>	<b>Stipule</b>	<b>Flower</b>	<b>Fruit</b>

## DNA finger printing of some germplasm of deshi and tossa jute:

Selected three primers were used to screen all nine genotypes of jute, but only one primer (MHR-24) amplified in all nine genotypes (Figure 3). Other two primers (MHR-21 and MHR-23), which didn't produce bands in nine genotypes were not considered in this study. Primer MHR-24 produced 6 loci in which 3 were considered polymorphic. The band size ranged from 279bp to 3593bp.



**Figure 3:** RAPD profiles of jute genotypes using primer MHR-24. Lane 5: Accession 1780, lane 6: Accession 1784, lane 7: Accession 2386, lane 8: Accession 2430, lane 9: Accession 2415, lane 13: Accession 1041, lane 14: Accession 1050, lane 15: Accession 1056, lane 16: Accession 1065. M= 100bp DNA ladder.

Inter-genotype similarity indices ( $S_{ij}$ ) ranged from 55.55 to 100% with an average of 77.25% (Table 1). The highest inter-genotypes similarity indices were found between accession 1780 and 2415 (100%). The lowest inter-genotypes similarity indices or band sharing value (55.55%) was observed between accession 1780 and 1056. The same value was also estimated between accession 1784 and 1056, 2386 and 1056, 2430 and 1056, 2415 and 1056, 1050 and 1056 and between 1056 and 1065.

**Table 1: Pair wise inter-genotypes similarity indices ( $S_i$ ) among jute genotypes**

Genotype combination	1784	2386	2430	2415	1041	1050	1056	1065
1780	90.90	90.90	90.90	100.00	80.00	80.00	55.55	80.00
1784		90.90	90.90	90.90	80.00	80.00	55.55	80.00
2386			80.00	80.00	80.00	80.00	55.55	80.00
2430				90.90	80.00	80.00	55.55	80.00
2415					80.00	80.00	55.55	80.00
1041						80.00	55.55	80.00
1050							55.55	80.00
1056								55.55
Average								77.25

The DNA polymorphisms were detected according to presence and absence of bands. Absence of bands may be caused by failure of primers to anneal a site in some individuals due to nucleotide sequence differences or by insertions or deletions between primer sites. Overall gene frequency of nine jute germplasm is presented in Table 2. The highest value of gene frequency was obtained 1.0000 among *mhr24*<sub>1242</sub>, *mhr24*<sub>517</sub> and *mhr24*<sub>279</sub>. The lowest gene frequency was obtained 0.2222 in case of locus *mhr24*<sub>606</sub>. Among 6 loci, 3 had a value less than 1.0000. These results suggest that there were some degrees of genetic variations in the jute germplasm.

Genetic diversity values of nine jute germplasm for one primer are given in Table 3. Overall Nei's gene diversity and Shannon's Information Index considering for all loci were estimated to 0.1728 and 0.2609. High level of gene diversity value (0.4938) and Shannon's Information Index (0.6870) were found in locus *mhr24*<sub>3595</sub>. The lowest level of Nei's gene diversity and Shannon's Information Index (0.0000) were found in locus *mhr24*<sub>1242</sub>, *mhr24*<sub>517</sub>, *mhr24*<sub>279</sub>. The results suggest that there are some degrees of genetic variation in jute germplasm.

**Table 2: Overall gene frequency**

Locus/Allele	Allele 0	Allele 1
<i>mhr24</i> <sub>3595</sub>	0.4444	0.5556
<i>mhr24</i> <sub>1242</sub>	0.0000	1.0000
<i>mhr24</i> <sub>831</sub>	0.1111	0.8889
<i>mhr24</i> <sub>606</sub>	0.7778	0.2222
<i>mhr24</i> <sub>517</sub>	0.0000	1.0000
<i>mhr24</i> <sub>279</sub>	0.0000	1.0000

**Table 3: Summary of the genetic variation statistics for all loci.**

Locus	Sample Size	na*	ne*	h*	I*
<i>mhr24</i> <sub>3595</sub>	9	2.0000	1.9756	0.4938	0.6870
<i>mhr24</i> <sub>1242</sub>	9	1.0000	1.0000	0.0000	0.0000
<i>mhr24</i> <sub>831</sub>	9	2.0000	1.2462	0.1975	0.3488
<i>mhr24</i> <sub>606</sub>	9	2.0000	1.5283	0.3457	0.5297
<i>mhr24</i> <sub>517</sub>	9	1.0000	1.0000	0.0000	0.0000
<i>mhr24</i> <sub>279</sub>	9	1.0000	1.0000	0.0000	0.0000
Mean	9	1.5000	1.2917	0.1728	0.2609
St. Dev.		0.5477	0.3952	0.2113	0.3052

na\* = Observed number of alleles, ne\* = Effective number of alleles, h\* = Nei's (1973) gene diversity, I\* = Shannon's Information index.

Nei's analysis of gene diversity in subdivided populations presented the gene flow (Nm) value was 0.0000 and co-efficient of gene differentiation ( $G_{ST}$ ) was 1.0000 (Table 4). Hardy – Weinberg expectation of average heterozygosity in sub-population (Ht) was 0.1728 and Hardy – Weinberg average heterozygosity obtained in sub population (Hs) was 0.0000.

**Table 4: Gene Flow (Nm) and the proportion of total genetic diversity (Gst) across different RAPD markers of jute genotypes.**

Locus	Sample Size	Ht	Hs	Gst	Nm
<i>mhr24</i> <sub>3595</sub>	9	0.4938	0.0000	1.0000	0.0000
<i>mhr24</i> <sub>1242</sub>	9	0.0000	0.0000	****	****
<i>mhr24</i> <sub>831</sub>	9	0.1975	0.0000	1.0000	0.0000
<i>mhr24</i> <sub>606</sub>	9	0.3457	0.0000	1.0000	0.0000
<i>mhr24</i> <sub>517</sub>	9	0.0000	0.0000	****	****
<i>mhr24</i> <sub>279</sub>	9	0.0000	0.0000	****	****
Mean	9	0.1728	0.0000	1.0000	0.0000
S.D ±		0.0446		0.0000	

Ht = Hardy-Weinberg expectation of average heterozygosity in sub-population

Hs = Hardy-Weinberg average heterozygosity obtained in sub-population

Gst = Co-efficient of gene differentiation

Nm = Estimate of gene flow from Gst or Gcs. e.g., Nm= 0.5 (1-Gst)/Gst

**Table 5: RAPD primers with corresponding bands score of polymorphic bands observed in jute genotypes.**

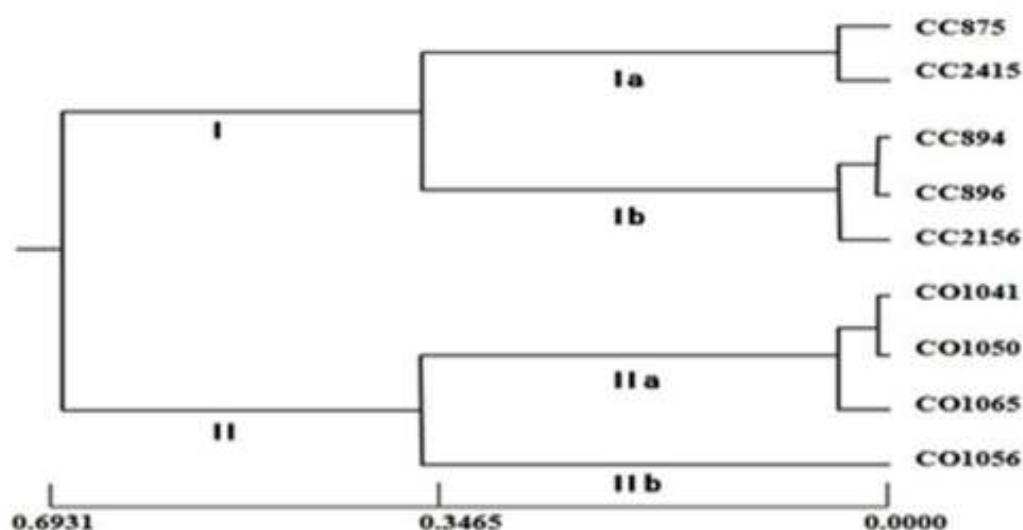
Primer Code	Sequences (5'-3')	Total number of bands scored	Number of polymorphic bands	Proportion of polymorphic loci (%)
MHR-24	TTCCCTCCCA	6	3	50.0

The values of pair wise Nei's genetic distance between genotypes computed from combined data for MHR-24 primer, ranged from 0.0000 to 0.6931 (Table 6). The lowest genetic distance (0.0000) was observed in accession 2386 vs 1784, 2430 vs 1784, 2430 vs 2386, 1050 vs 1041, 1065 vs 1041 and 1065 vs 1050. The highest genetic distance (0.6931) was found in accession 1056 vs 1780 and 1056 vs 2415.

**Table 6: Summary of Nei's (1978) genetic distance values among jute genotypes.**

Accession No	1780	1784	2386	2430	2415	1041	1050	1056
1784	0.1823							
2386	0.1823	0.0000						
2430	0.1823	0.0000	0.0000					
2415	0.0000	0.1823	0.1823	0.1823				
1041	0.4055	0.1823	0.1823	0.1823	0.4055			
1050	0.4055	0.1823	0.1823	0.1823	0.4055	0.0000		
1056	0.6931	0.4055	0.4055	0.4055	0.6931	0.1823	0.1823	
1065	0.4055	0.1823	0.1823	0.1823	0.4055	0.0000	0.0000	0.1823

A dendrogram based on Nei's genetic distance grouped nine jute germplasm into two main clusters (Figure 4). Cluster I comprised of accession 1780, 2415, 1784, 2386 and 2430. On the other hand cluster II comprised accession 1041, 1050, 1065, and 1056. According to the dendrogram and inter-germplasm similarity index it was concluded that the higher genetic distance indicated the lower inter-germplasm similarity index. On the contrary, the lower genetic distance indicated the higher value of inter germplasm similarity index. In cluster I accession 1784, 2386 and 2430 formed sub cluster-Ib. In cluster II accession 1041, 1056 and 1065 formed subcluster-IIa. Accession 1780, 2415, 1784, 2386, and 2430 positioned in cluster I because these belongs to *C. capsularis* whereas, accessions 1041, 1050, and 1065 formed cluster II, because these belongs to *C. olitorius*.



**Figure 4:** UPGMA dendrogram based on Nei's genetic distance, summarizing the data on differentiation between jute genotypes according to RAPD analysis.

The highest inter-genotype similarity was found in accession 1780 and 2415. The lower inter-genotype similarity found in another eight pair of jute genotypes means that, they are heterozygous in nature. Higher similarity could be found of the germplasm that are collected from same location and they are homozygous. Accession 1780 and 2415 is the member of *C. capsularis*, so it is expected that the genetic distance between them should be less. Therefore, considering inter-genotype similarity indices and genetic distances, it can be concluded that accession 1780 and 2415 would be of same origin.

The overall percent polymorphism and gene diversity values show that there is some degree of variation among different jute genotypes. The key finding of this study is that *C. capsularis* and *C. olitorius* are separated distinctly by RAPD marker. The five genotypes of *C. capsularis* formed one cluster, whereas four genotypes of *C. olitorius* grouped into another cluster. Therefore, the primer MHR-24 gave important information for separating *C. capsularis* from *C. olitorius*.

## 11. Research Highlights:

- Four GI materials of jute, namely Suti Pat and Asman Tara of deshi jute, Deo Nailla of tossa jute and Bot Nailla of kenaf showed clear distinctness among themselves and these are highly tolerant to disease, insect and pest, and can be utilized in breeding programme for varietal development.
- Two GI materials of cotton, Comilla cotton 1 (Hill cotton 1) and Comilla cotton 2 (Hill cotton 2) were clearly distinct from each other in respect of lint colour. Comilla cotton 2 (Hill cotton 2) had brown lint colour.
- Seven varieties of deshi jute, five varieties of tossa jute, three varieties of kenaf and two varieties of mesta are high yielding, distinct from each other and can be used in multiple crossing programme to breed varieties with high fibre yield.
- Among 48 genotypes of deshi jute, 15 genotypes namely 2156, 2253, 2448, 2497, 2528, 2545, 2549, 2556, 2571, 3176, 3309, 3255, 3410, 3490 and 3914 had light red petiole colour, and therefore these genotypes may be utilized in breeding programme as genetic marker for crop improvement.
- Among 47 genotypes of tossa jute, 6 genotypes namely 1442, 3708, 3711, 3716, 3802 and 4159 had red pigmentation in stem, petiole and stipule and these are highly tolerant to disease, insect and pest. Therefore, these genotypes may be utilized in resistant breeding programme for crop improvement.
- Ten genotypes of deshi jute, namely 1780, 2156, 2497, 2532, 2533, 2549, 2552, 3410, 2571 and 2762, and 14 genotypes of tossa jute, namely 1312, 1362, 1987, 2407, 2429, 2670, 3499, 3755, 3756, 3801, 3802, 4178, 4852 and 4450 gave high fibre yield/plant and therefore, these genotypes may be utilized in breeding programme to breed varieties with high fibre yield.
- DNA finger printing of three GI materials of deshi and tossa jute, two varieties of tossa jute, five genotypes of deshi jute and four genotypes of tossa jute showed clear distinctness among them.

**12. Environmental and social safe guard matrix showing before and after intervention of the project.**

Sl. No.	Environment issue	Component	Before Implementation				After Implementation			
			Small	Moderate	Large	None	Small	Moderate	Large	None
1.	Biodiversity	Flora		+				+		
		Fauna		+				+		
		Genetic diversity		+				+		
		Exotic varieties				+				+
		Local Varieties/cultivars				+				+
		Hybrids				+				+
2.	Soil quality	Organic matter	+				+			
		Chemical fertilizer use	+				+			
		Soil salinity				+				+
		Fertility status		+				+		
		Microbial activity		+				+		
		Heavy metal contamination				+				+
		Water quality		+				+		
3.	Agro-Chemicals	Pesticide use	+				+			
		POPs								
		IPM								
		Pest infestation	+				+			
		Bio-pesticides								
		Health hazard				+				+
4.	Pollution	Soil				+				+
		Water				+				+
		Air				+				+

### 13. Major Attainments

#### a. Technical: Output, Outcome and Impact

SL No	Major technical activities performed in respect of the set objectives	Output (i., e product obtained, visible, measurable)	Outcome (short term effect of the research)	Impact (long term effect of the research)	Remarks
1.	Characterization of geographical indication (GI) materials of jute and cotton.	Morphological characterization of four GI materials of jute and two GI materials of cotton was completed.	Collection of GI materials of jute and cotton enriched the genetic stock. The GI materials of jute and cotton can be used as parental materials for hybridization programme.	Characterization of GI materials of jute and cotton would be useful establishing Intellectual Property Right (IPR).	
2.	Characterization of released /registered varieties of jute, kenaf and mesta.	Morphological characterization of 7 varieties of deshi jute, 5 varieties of tossa jute, 3 varieties of kenaf and 2 varieties of mesta was completed.	Characterization of varieties of jute, kenaf and mesta can be useful in identifying each individual from each other. These can be used as parental materials for hybridization programme.	Characterization of varieties of jute, kenaf and mesta would be useful in establishing Intellectual Property Right (IPR) for protection of BJRI varieties.	
3.	Characterization of germplasm of deshi and tossa jute.	Morphological characterization of 48 germplasm of deshi jute and 47 germplasm of tossa jute was completed.	Characterization of germplasm of deshi and tossa jute would be helpful in identifying the genotypes from each other. This would also be helpful in selecting desirable genotypes for utilization in variety development programme.	Characterization and documentation of germplasm of deshi and tossa jute would be helpful in identifying the genotypes from each other. This would also be useful in establishing Intellectual Property Right (IPR) for protection of BJRI germplasms.	
4.	Genetic finger printing of germplasm of jute.	DNA finger printing of three GI materials of deshi and tossa jute, two varieties of tossa jute, five genotypes of deshi jute and four genotypes of tossa jute was completed.	Finger printing of GI materials, varieties and germplasm of jute would be useful in identifying genotypes from each other. This would be also helpful in utilizing the plant materials in varietal improvement programme.	Molecular characterization and documentation of GI materials, varieties and germplasm of deshi and tossa jute would be helpful in identifying the genotypes from each other. This would also be useful in establishing Intellectual Property Right (IPR) for protection of BJRI germplasm.	



**b. Procurement:**

Sl. No	Approved provisions of procurement (list major items)	Achievements	% of achievements	Remarks (reason, if anything otherwise)
1.	Seed, fertilizer, pesticide and chemicals	Procured	100	
2.	Office supply and services(stationeries)	Procured	100	
3.	Hiring of vehicle	Procured	100	
4.	Contingences	Procured	100	
5.	Capital expenses	Procured	100	

**c. HRD/Training:**

Title (e.g Ph.D/MS/Trainings, workshops conducted etc.)	Target	Attainments	No. of participants	Benefit of the higher studies/trainings (application of the learning, productivity enhancement)	Remarks (reason, if anything otherwise)
Nil					

**d. Financial:**

Sl. No	Major Head	Fund released (Tk.)	Expenditure (Tk.)	Balance/ Unspent (TK)	Remarks (reason, if anything otherwise)
1.	Salary & Remuneration	367202.55	346239.55	20963.00	
2.	Field research/Lab expenses	1645167.00	1645167.00	-	
3.	Operating expenses	366750.45	366750.45	-	
4.	Vehicle hire, fuel, oil and maintenance	125000.00	125000.00	-	
5.	Publication and Printing	50000.00	50000.00		
6.	Contingencies	205000.00	205000.00	-	
7.	Capital expenses	985500.00	985500.00	-	

**e. Materials developed/publication made:**

Type of material/publication	Title	Number	Remarks (being used by/meant for/any other)
Technology development			
Process development			
Information development	Characterization of Important Plant Genetic Resources	1	Submitted to BARC
Journal publication			
Books/Monographs/Manual published			
Booklet/flyer etc. published			
Any other (patenting of technology etc.)			

#### 14. Sub-project Auditing (cover all types of audit performed)

Types of Audit (e.g BARC/Implementing agency/FAPAD/World Bank/others )	Major observations / issues/objections raises, if any	Status at the sub-project end	Remarks
GoB	No objection raised	Satisfactory	

#### 15. Reporting

Report type	Actual Date of submission	Total Number (s)	Remarks (if anything otherwise)
a. Inception report	29.01.2012	1	
b. Monthly reports	02.02.2012,05.03.2012 03.04.2012,03.05.2012 03.06.2012,03.07.2012 03.08.2012,03.09.2012 03.10.2012, 03.11.2012 03.12.2012, 03.01.2013 03.02.2013, 03.03.2013 03.04.2013, 03.05.2013 03.06.2013, 03.07.2013 03.08.2013,03.09.2013 03.10.2013,	21	
c. Statement of expdts. (SoE)	02.02.2012, 05.03.2012 03.04.2012, 03.05.2012 03.06.2012, 03.07.2012 03.08.2012, 03.09.2012 03.10.2012, 03.11.2012 03.12.2012, 03.01.2013 03.02.2013, 03.03.2013 03.04.2013, 03.05.2013 03.06.2013, 03.07.2013 03.08.2013, 03.09.2013 03.10.2013,	21	
d. Quarterly report(s)	14.03.2012	1	
e. Six monthly report	03.05.2012, 24.07.2013	2	
f. Procurement plan	02.02.2012	1	
g. Annual research program format	-	-	
h. Environmental monitoring (Annual Basis)			
i. Social safeguard status (Before and at the end)	Shown in sl.no. 12		
j. Field Monitoring Report(s)	09.09.2012,10.09.2012 20.12.2010,28.08.2013 31.08.2013	5	

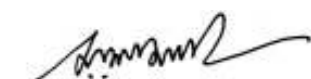
**16. Problems/Constraints (bullet points-max. 5 nos.):**

- DNA isolating from jute leaves was a problem because of the presence of mucilage in the leaves.

**17. Suggestion for future, if any:**

Molecular characterization is a modern field of research offering great promise for genetic improvement and varietal development. In a wide array of biological systems, it is very useful for identification of germplasm for desired morpho-agronomical traits. This strengthens the genetic resources activities and helps in identifying materials from each other. Therefore, molecular characterization of rest genotypes of jute, kenaf and mesta need to be completed for identifying the genotypes.

**Signature of the Principal Investigator**



**Dr. M. Abbas Ali**

Principal Investigator

Date 30-6-2014

Seal (DR. M. ABBAS ALI)  
Chief Scientific Officer  
Genetic Resources & Seed Division  
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**Counter signature of the Head of the agency/authorized representative**



Date

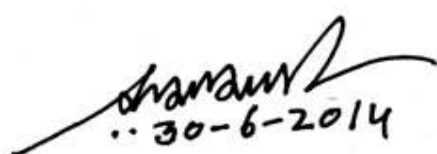
Seal

*Dr. Md. Kamal Uddin*  
Director General  
Bangladesh Jute Research Institute  
Manik Mia Avenue, Dhaka-1207

List of Capital Items purchased under NATP-SPGR supported “Coordinated Sub-Project on Characterization of Important Plant Genetic Resources (BJRI Component)” are given below;


Sl.No.	Name of Items	Quantity
01.	Refrigerated Centrifuge Machine with Fixed Angle Rotor (Herolad Germany)	1
02.	pH Meter (HANNA)	1
03.	Liquid Nitrogen Container (China)	1

The above Capital Items are kept in the biotechnology laboratory of Cytogenetics Department, Genetic Resources and Seed Division of Bangladesh Jute Research Institute and all the items are using in the laboratory.

  
.. 30-6-2014

Dr. M Abbas Ali  
PI & CSO

(DR. M. ABBAS ALI)  
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Genetic Resources & Seed Division  
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